

# **SOCIETAL, ENVIRONMENTAL AND STAKEHOLDER DRIVERS OF COMPETITIVE ADVANTAGE IN INTERNATIONAL FIRMS**

by

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## ABSTRACT

This research focuses on a set of societal, environmental drivers and stakeholder drivers relevant to international firms that drives competitive advantage assessed by Economic Value Added (EVA). Firms were classified into three groups based on high positive, low positive and negative EVA. The items were also grouped as societal, environmental and stakeholder drivers. Responses received from firms from USA and firms from Asia were utilized along with published data on Economic Value Added for the sample firms. After statistical analysis, the results show significant association with four specific societal and eight environmental drivers for the USA sample. For the Asia sample, only three specific societal drivers were significant. Further analysis estimated the extent that the societal drivers drive the dependent variable (competitive advantage as assessed by EVA). There is a distinct difference between the USA sample and the Asia sample, thereby providing scope of drawing appropriate implications for improvement. This approach provide researchers, managers and policy makers with a diagnostic tool to dynamically estimate firm's performance in terms of societal and environmental drivers with respect to the pertinent stakeholders of international firms. Managerial implications and limitations are discussed in detail.

**Key words:** International firms, competitive advantage, Economic Value Added, societal drivers, environmental drivers

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# CHAPTER 1

## INTRODUCTION

### 1.1 Rationale of the research study

The configuration and context of business at the global level is transforming with the growing need for sustainability coupled with growth. There is escalating evidence that globalization and the new generation of information technology have made traditional sources of competitive advantages less significant. Firms are differentiating themselves by adopting strategies that are encased in best practices, are benevolent to the society and benign to the environment. Hitherto, corporate leadership dichotomized their philanthropic initiatives and revenue generating approaches. But the intensified competition, consumer expectations, governance imperative and natural resource crunch have driven corporate leadership to synthesize their corporate social responsibilities with corporate strategies. Emanating from this is the value-driven firm that needs to maintain the highest standards of business conduct, while meeting performance targets. The current CSR literature present assertions that consumers prefer products and services from firms with best practices (Mitchell, 2001), investors are incorporating sustainability evaluations in their due diligence (Accountability, 2002), employees adhere to firms with reputation and stakeholder pressures unfurl innovation (Knox, 2005). Firm growth creates visibility. Businesses are legally incorporated explicitly or implicitly, endowed with a set of responsibilities. It is encouraging to note that an estimated US\$230 billion is invested in corporate citizenship annually, while pro bono contributions are up by 17.5 percent to 2 percent of US gross domestic product (Gardberg, 2006). On the flip side, there has been an estimated US\$ 2.6 trillion loss of Corporate value recently due to corporate governance issues (Narayana Murthy, 2006). The researchers claim that propositions about Corporate Social Responsibility are intuitively appealing but the operationalization and adoption of such initiatives are distant from ground realities (Knox, 2005). They often embellish the Sustainability Reports and the CSR section of the Company Reports. But there a distinct dearth of appropriate framework for the implementation of CSR programs that dove-tail with the firm strategies. The core issue here is the way to conduct business that creates value and at the same time are responsible to the society, the environment and the stakeholders. A related challenge is the diffusion of the CSR–strategy linkage down the line from the leadership level to the operational level. Corporate citizenship programs are comparable to Research and Development and advertising that can create intangible assets for firms (Gardberg, 2006). Corporate virtue in the form of social responsibility and environmental responsibility is likely to pay off. Corporate social and environmental performance (CSP) was found to be is moderately positively associated with Corporate financial performance (CFP) (Orlitsky, 2003). The linkage of Corporate Social Responsibility with strategy is reflected in new partnerships and alliances. The partnership for Climate Action between seven multinational companies (MNCs) for voluntarily adopted stringent emission reduction standards for greenhouse gases in anticipation of global regulation by the Kyoto Protocol, is one such example (Christmann, 2004).

The methodological issue to pursue research concerning the relationship between corporate social performance and corporate financial performance is analyzed using multiple sources of data. Two sources are based on the perceptual framework of KLD Index and the Fortune

reputation survey and two that are based on the performance standards, viz., TRI database and corporate philanthropy (Griffin and Mahon, 1997). The two fold method actually triangulates the assessment of corporate social performance. The current research also supplements the questionnaire based survey instrument along with publicly available CSR and sustainability information as well as open ended qualitative inputs from experts collected during CSR Conferences, Colloquiums and interviews.

This research aims to establish a dynamic framework based on societal, environmental and stakeholder drivers of international firms, who follow best practices, and their effect on the Economic Value Added © and perceived Competitive Advantage. The distinctiveness here is the dynamic nature of the framework that companies may choose and adapt to benchmark their CSR performance periodically. The linkage of the societal, environmental and stakeholder drivers with the Economic Value Added (EVA) provides the much needed justification to the corporate leadership to pursue CSR. In a way, the linkage between the societal, environmental and stakeholder drivers and EVA can motivate corporate leadership to adopt CSR vigorously so as to drive the firm towards sustainability through best practices with performance. This dynamic framework could catalyze to dispel the traditional assertion that environmental and social equity were at odds with economic prosperity (Bansal, 2005). It is found that shares of companies with good sustainability records perform better financially than those of less socially responsible firms (Morgan Stanley study, 2003). Corporate citizenship and Governance is becoming the mainstay of competitive advantage (Fittipaldi, 2004). International firms largely depend on Foreign Direct Investment (FDI) for their capital. Such capital from investors has attained a high degree of mobility. Investors tend to realize that investments would generate benefits when invested in responsible companies. Research shows that about 4 percent of total funds available for investment are governed by CSR principles (Zadek, 2002). The consolidation of Socially Responsible Investments (SRI) pressurizes firms not only to remain competitive in their commercial business areas but also to be competitive in the capital market (Young and O'Byrne, 2001). Corporate Business is accountable to society and needs to live up to societal expectations and environmental standards in order to flourish sustain-ably. Traditionally, there is an entrenched assertion that environmental integrity and societal equity were at odds with economic prosperity dynamic framework (Bansal, 2005). This manifested as a gap between a company's philanthropic activity and corporate strategy. Environmental compliance was viewed as a cost. Today's 'International Business in the Age of Anxiety' has propelled firms to expand their activities beyond those associated with the direct stakeholder relationships, in order to maintain their competitive position (Hillman & Keim, 2001). The Global Survey of Business Executives (Asian Development Bank, January 2006) considered the relationship between Corporate Responsibility and Corporate Performance. Results showed that 16 percent of corporate businesses focus solely on providing the highest possible returns to investors while obeying all laws and regulations. But an impressive 84 percent generate high returns to investors but balance this with contributions for the broader public good. Research shows that investors are willing to pay a premium for well governed companies. For instance, premium levels are 25 percent in China, 25 percent in Indonesia and 23 percent in India, for Asia. (McKinsey Quarterly, February 2006). Thus, researchers need to probe whether organizations intent on expanding societal, environmental and stakeholder initiatives boost their competitive position.

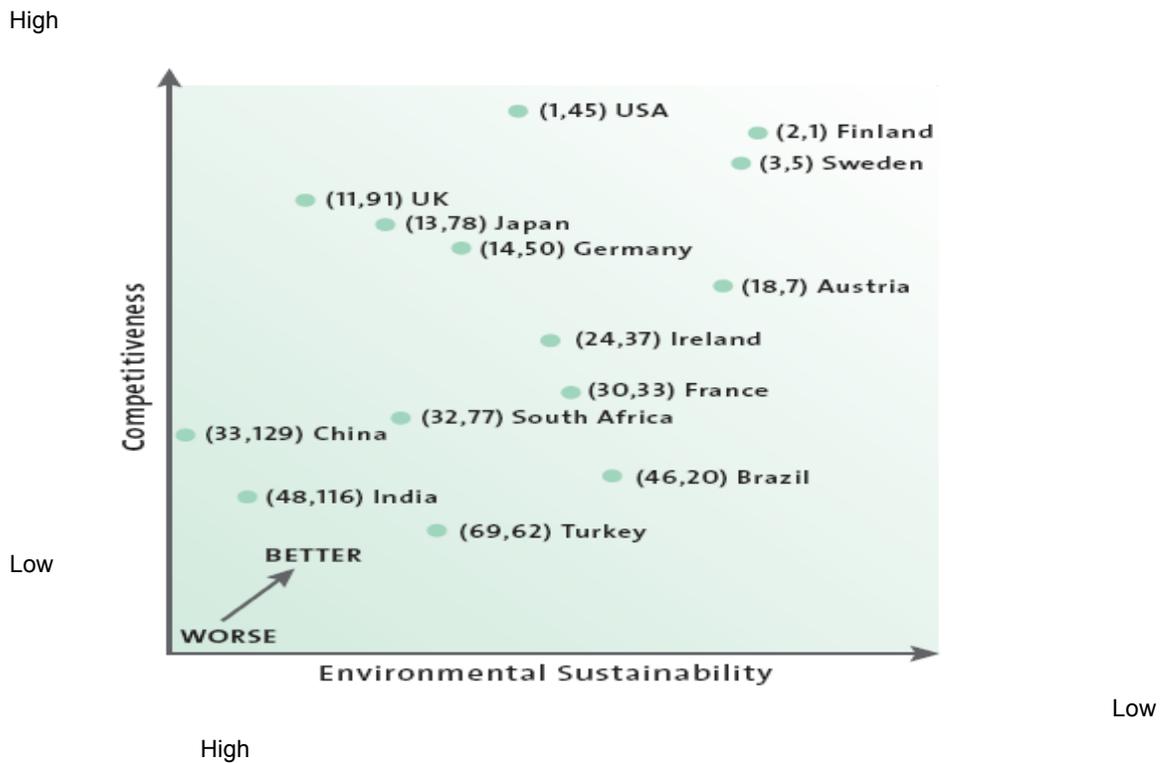
There is a macro-level shift in the role of business in society where societal, environmental and stakeholder initiatives could reshape the basis of economic competitive advantage. The field of Corporate Social Responsibility has been largely disconnected from corporate strategy while functioning in a competitive environment. It is necessary to explore the shifts in the role of business to integrate with societal, environmental and stakeholder engagements and to find out its influence on competitive value (Swift and Zadek, 2002).

Stakeholders are increasingly exerting pressure for information on business activities aside from financial performance (Brown, 2000):

- Investors are looking for evidence of good corporate governance, particularly sound business strategy and effective management of risk.
- Customers are asking about the origins of products, their manufacturers and what they contain.
- Employees are looking to work for companies that visibly account for their responsibilities to society and the environment.
- Governments and civil society are increasingly placing pressure on businesses to report on social and environmental performance.

The World Economic Forum released a country-by-country index on competitiveness and environmental sustainability that illustrated that the two do not necessarily positively correlate (Figure 1.1). This Environmental Sustainability Index map provides a relative positioning of environmental stewardship of countries. It may be seen that Finland, and Sweden occupy superior positions both with respect to Environmental Sustainability and Competitiveness. As depicted in the figure, Germany comes in 14th place on the competitiveness axis, but its ranking is 50th in environmental sustainability. In other words, one needs to understand better the economic impacts of business and their relationship to sustainable development. As an industrialized country, Germany could have substantial pollution related issues that need to be managed to the extent that matches their superior competitiveness rank. Figure 1.1 also identifies distinct differences between the ranks of USA (Competitiveness: 1, Environmental Sustainability: 45) and major nations in Asia, China (33, 129) and India (48, 116). USA ranks number 1 in terms of competitiveness, but has a relatively low rank of 45 for environmental sustainability. This difference may be interpreted that the economic development may not necessarily reflect its environmental performance. This research focuses on the comparison between societal, environmental and stakeholder drivers between international firms in USA and Asia. The difference in relative rankings between USA and major Asian countries like India and China reiterates the importance to analyze the differences in sustainability performance vis-à-vis economic accomplishments. Countries in Asia, apart from Japan and Singapore, have limited capabilities for investment in environmental protection and infrastructure and are at various stages of economic development and human development status that translate into low rankings (Esty, Levy et al. 2003).

**Figure 1.1 Country positions of Competitiveness and Environmental Sustainability:**



[adapted from World Economic Forum, Global Competitiveness Report, 2002]

Differences between the USA and Asia could also be attributable to the diversity of legal regimes and regulatory systems. Due to the presence of multiple dimensions, the challenges for developed versus developing countries are also distinct.

A number of Standards are in place that provides robustness to measure the Corporate Responsibility standards and have received consensus among practitioners and society at large. But it is necessary to adopt a standard that comprehensively covers the Societal, Environmental, Stakeholder as well as economic aspects.

Though there is an increase in the number of firms that are adopting CSR initiatives and reporting, they fail to impact business decision making (Zadek, 2002). This hiatus between application and implementation have blunted the incisive potential of CSR and Strategy. The

corporate leadership may be inclined to CSR. But the corporate CSR agenda needs to be apportioned to the operational levels. For the sake of uniformity and durability of CSR-Strategy linkage programs in firms, the perception of CSR needs to change to become a contributor of sustainable business development.

**Table 1.1: The Corporate Responsibility Standards and Impacts**

Legend:

- ✓✓✓ Inclusion, with extensive coverage
- ✓✓ Inclusion, with some coverage
- ✓ Inclusion, with minimum reference
- No inclusion

[GRI: Global Reporting Initiative (emphasis on reporting)]

AA1000S: Assurance Standard (inclusion of robust and credible assurance process)

Standards	Economic	Social	Environmental
<b>Aspirational Principles and Codes of Practice</b>			
Amnesty International Human Rights Guidelines for Companies	✓	✓✓	-
APEC Code of Business Conduct	✓	✓	✓
Balanced Business Scorecard	✓	✓	-
Caux Principles for Business	-	✓	-
ECCR/ICCR	-	✓	-
Ethical Trading Initiative (ETI)	✓	✓✓✓	-
Global Sullivan Principles	✓	✓✓	-
OECD Guidelines for Multinational Enterprises	✓	✓	-
The Natural Step	✓	✓	✓✓✓
UN Global Compact	✓	✓	✓
WHO/UNICEF Breastmilk	-	✓✓	-
<b>Management Systems and Certification Schemes</b>			
EFQM Business Excellence Model	✓	✓✓	✓✓
EMAS	-	-	✓✓✓
EU Eco-label	-	✓	✓✓
Forestry Stewardship Council (FSC)	-	✓	✓✓
ISO9000	✓	✓	✓
ISO14001	-	-	✓✓
SA8000	-	✓✓	-
Sigma	✓	✓✓✓	✓✓✓
<b>Rating Indices</b>			
Arese Sustainable Performance Indices (ASPI)	✓	✓✓	✓✓
Dow Jones Sustainability Index (DJSI)	✓	✓✓	✓✓
FTSE4Good	✓	✓✓	✓✓
<b>Accountability and Reporting Frameworks</b>			
AA1000S	✓	✓✓✓	✓
GRI	✓✓	✓✓✓	✓✓✓

EMAS: Eco Management and Audit Scheme

FTSE: Financial Times Stock Exchange

SA8000: Social Accountability 8000 (focus on labour standards)

EQFM: Excellence Ireland Quality Association (focus on quality)]

(Source: Business and Economic Development: the Impact of Corporate Responsibility standards and Practices; AccountAbility and Business for Social Responsibility; 2003)

The role of the standards is paramount as environmental sustainability challenges evolve in multiple forms and combinations. Table 1.1 shows that most of the corporate responsibility standards address only one of the three pillars of sustainable development, i.e. social, environmental, or economic, to any great extent. Standards like the Caux Principles for business, Ecumenical Committee for Corporate Responsibility (ECCR) / Interfaith Centre for Corporate Responsibility (ICCR) reports are mainly based on aspirational principles and Codes of Practice and do not include economic issues. Among the reports that covers Management Systems and Certification Schemes, include Eco-Management and Audit Scheme (EMAS), ISO 14000 and Social Accountability 8000 (SA 8000). The EMAS focuses mainly on manufacturing industries covering bio diversity, air quality, noise pollution, energy, water, waste and raw materials. ISO 14000 covers quality and environmental management. While, the SA 8000 focus on human rights and employee relations issues. None of them attends to economic aspects. Other Standards include the Ethical Trading Initiative (ETI), Global Sullivan Principles, and OECD Guidelines for Multinational Enterprises. The ETI targets Global supply chains, staffing in supply chains and sourcing facets of business. The Global Sullivan Principles covers economic, social and political justice by companies. They address human rights, gender diversity and quality of life for communities (European Commission, 2003). There is a gap in terms of coverage of environmental aspects.

The Global Reporting Initiative offers the most comprehensive array of sustainability themes and metrics and is increasingly gaining the acceptance of the international business community. The GRI has updated their reporting system by introducing the concept of integrated indicators of multidimensional performance that cut across the pillars of sustainable development and include the economic, social and environmental aspects. It links competitive advantage to sustainability. There are two types of economic relationships: first, the relationships that a company has with stakeholders like employees, suppliers, customers, competitors, communities, and regulators; and second, the ways in which corporate activities alter the balance of capital stocks in a community — not just technological or industrial but also human and natural capital. The stakeholder relationships and the corporate activities in a community influences performance of the firm.

## **1.2 Research purpose**

This research attempts to study under what conditions and through which societal, environmental and stakeholder drivers do international corporations entities create Competitive Advantage as measured by Economic Value Addition. Very often the corporate decision makers face the dilemma to justify Societal, Environmental and Stakeholder related initiatives and related investments, as they have no direct evidence to affect the bottom-line. But, the growing necessity to manage issues that affect business reputation cause firms to incorporate societal, environmental and stakeholder concerns into the corporate 'radar'.

Some firms re-orient themselves proactively, while others are compelled not to ignore the pressure groups like the Non Governmental Organizations and entities that promote Sustainability. Such pressure groups or activists often approach Corporate businesses urging them to adopt the Societal, Environmental and Stakeholder ‘path’, without adequate, objective and measurable goals. Firms respond to such overtures through philanthropy, or short term projects. Yet, proper deployment of societal, environmental and stakeholder steps can lead to Competitive Advantage. This research analyzes how international companies adopt the drivers of societal, environmental and stakeholder drivers in corporate strategy. This paper aims to investigate the interaction between Societal, Environmental and Stakeholder initiatives and Competitive Advantage as measured by Economic Value Added.

### **1.3 Problem statement**

To find out the Societal, Environmental and Stakeholder expectations that creates Competitive Advantage in international firms.

To what relative extent international organizations in the USA and Asia create value by meeting Societal, Environmental and Stakeholder expectations.

The measures and indicators those are most relevant in assessing the quality of stakeholder relationships that augment competitive advantage.

Based on the conceptual framework developed in this research study, the solutions to these problems would be addressed through the development of specific objectives regarding the drivers.

### **1.4 Specific objectives**

Following the problem statement, the specific objectives of this research are as follows:

- To identify the key Societal, Environmental and Stakeholder drivers in international firms.
- To determine the extent these drivers are used by firms from the USA and firms from Asia.
- To compare the significant differences between firms from the USA and Asia with respect to the application of the Societal, Environmental and Stakeholder drivers.
- To gauge the extent to which the Societal, Environmental and Stakeholder drivers and perceived Competitive Advantage relate to Economic Value Added.

### **1.5 Scope and Limitations**

The scope of this research is to consider the role of Societal, Environmental and Stakeholder drivers in terms of creation of value for firms. The research study examines literature that addresses the issue of the way firms’ value creation strategies incorporate the expectations of the stakeholders so as to generate competitive advantage as measured by Economic Value Added.

Sample companies are not selected through random sampling and the cases selected are representative of the companies who support CSR. This research deliberately selected leading international companies who have a distinguished record in CSR.

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

A number of theories have attempted to capture the impact of Corporate Social Responsibility (CSR). CSR is characterized by four areas of responsibility: economic, that maintains growth; legal, that provides legitimacy; ethical, that leads to right behavior; and full commitment, that goes beyond compliance (Carroll, 1979). Freeman's (1984) definition of stakeholders as 'any group or individuals who can affect or are affected by the achievement of a firm's objectives' and on 'how stakeholders matter' represents the new paradigm of societal expectations. The evolution of Societal and Environmental drivers in the midst of corporate turmoil indicates a 'continuing state of emergence' (McWilliams et al, 2006). This poses an interesting challenge for Corporate Social Responsibility as a dynamic capability influencing responsiveness to stakeholders and competitive advantage (Marcus, 2006).

The key drivers that add optimum value to businesses are through commitment to governance, engagement with stakeholders and determination to achieve environmental sustainability. 'Societal value added' relies on transformational leadership, value statements, commitment to learning, innovation and global networking. The 'value performance levers' include financial and non-financial measures, auditing, verification and reporting systems (Zairi and Peters, 2002). The path towards the strategic application of Corporate Social Responsibility requires modifications and adaptations to business models, appropriate technologies and knowledge based technologies that enhance value creation (Sharma and Henriques, 2005).

Ethical and economic viewpoints are traditionally mutually exclusive. The ethical view builds corporate reputation while the economic outlook limits to strategic philanthropy. These perspectives tend to exist at opposite ends of a continuum. There exists a gap that calls for a synthesis to overlap the ethical and economic perspectives. Filling this gap would give rise to value creation that contributes to improvement in the competitive advantage of firms. Ethical responsibilities are positioned mandatory compliance that is driven by legal regulations and desirable philanthropy, which are voluntary. The 'economic' Corporate Social Responsibility eschews the 'moral' stance of business (Windsor, 2006).

Table 2.1 presents a representative summary of the essence of the literature from the point of view of value creation driven by societal, environmental and stakeholder drivers and the gaps and scope they present. The essence of the value creation view is that incorporating societal, environmental and stakeholder drivers is not about enhancing the immediate returns, but

about driving companies toward new levels of value creation. The appropriate future pricing of resources that are now regarded as cheap or even free, such as water, and climate, as well as the future pricing of emissions, call for a global revaluing of the resources that support prosperity (Hedstrom, 2000). These highlight the relevance of stakeholders to firm's objectives in order to create a structure that is a part of the business framework. The societal, environmental and stakeholder drivers lead to innovations, that could improve economic performance. Innovation and social license to operate are significant factors. Innovations facilitate the firm to look for novel paths to serve the entities with which it is linked. All this culminates in the triple bottom line performance using the Global Reporting Initiative.

Detailed literature review is presented in the following sections in Chapter 2, along with an overview of the generic lineages from studies linking Societal, Environmental and Stakeholder initiatives to Performance provided in section 2.20. Carroll's (1979) four dimensions of corporate citizenship initiated the ethical reasoning. The economic, legal, ethical, and full commitment dimensions lead to beyond compliance corporate citizenship in business. These are a set of defined responsibilities, not tradeoffs. This gave rise to the scope of studying traditional gap between ethics and economics. Freeman's (1984) Stakeholder framework underlined the influence of stakeholders which may be direct or indirect. The proposition stated that different stakeholders influence corporate sustainability practices based on their resource interdependence with the firm. This approach provided the seminal scope of designing appropriate strategies to harness stakeholder salience.

The contribution of Clarkson (1995) was the proposition that engagement with stakeholders leads to innovations and thereby affect strategy. Mitchell (1997) developed the outline of a framework for stakeholder criticality. The implication for this is a relationship between firms and other institutions in the societal environment. This relationship inextricably links primary and secondary stakeholders. The view of stakeholder criticality emphasizes the stakeholders' influence on the firm's behavior and processes.

Donaldson and Preston (1995) linked the rights of stakeholders in a business eco-system to managerial and economic perspectives, thereby giving rise to fill in the gap of non-aligned business strategies that are not in line with the stakeholder aspirations. Castells (2000) evolved the approach to map stakeholder relationships onto business models. Schaltegger & Wagner (2003) emphasized the need to isolate the environmental drivers on performance. This provided the scope to determine the importance of the environmental factors. Burns (2003) put forward the triple bottom line performance for firms that emphasized the need to isolate the environmental drivers on performance. This provided the opportunity to determine the weightage assigned to the environmental factors. Burns (2003) put forward the triple bottom line performance for firms that benchmarked the value of CSR to business, that CSR is not a new way of doing business but rather a way to perform business better. This identifies as to how business could perform in a better manner incorporating the societal, environmental and stakeholder drivers. Many companies act in act in a responsible manner believing that 'they are the right thing to do'. In the absence of a proper business case for sustainability, such approaches may be subjected to changing priorities, shifts in senior management or swings in economic outlook. By adopting societal, environmental and

stakeholder drivers in a business case framework, firms would be able to link such initiatives to performance.

**Table 2.1: A representative summary of the literature with gaps and scope:**

Researcher	Relevant Idea / Contribution	Linkage	Gaps/Scope
Carroll, 1979	Four main corporate social responsibilities of firms	CSR relevance to firms	Scope of CSR broadens
Freeman, 1984	Stakeholders who can affect or are affected by achievement of a firm's objectives	Stakeholders linked to firm's objectives	Seminal effect, laid foundations
Clarkson, 1995	Stakeholder along with distributed decision making influence innovations of firms	Stakeholders lead to innovations, thereby affect strategy	Focus shift: tangibles to stakeholders
Mitchell, 1997	Stakeholder identification and salience	Framework for stakeholder criticality	Approach not integrated
Donaldson and Preston 1995	Companies embedded in business ecosystem, adopting stakeholder relationships results in a improved performance	Stakeholder relationships part of business ecosystem, improve economic performance	Industry specific, relationships led to costs
Castells, 2000	In <i>information age</i> , societal relationships are integrated with the globally networked business model of firms	Mapping stakeholder relationships onto business models	Models skewed towards profitability
Schaltegger & Wagner, 2003	Effect of environmental performance must be isolated from other factors influencing economic performance	Need to isolate environmental drivers on performance	Weightage of environmental factor need to be determined
Center for Innovation in Management, 2003	In a competitive environment, ability to engage critical stakeholders leads a company to innovate efficiently; this creates value	Innovation and social license to operate are most important factors	Need to estimate empirical relationship
Burns, 2003	Triple bottom line model for sustainability (economically, environmentally, and societally responsible) provides Societal and Environmental compliance strategies to augment their economic position	Triple Bottom Line performance used by Global Reporting Initiative	Need to segregate each of the three factors' impact on performance
Dahl, 2004	Environmental compliance lead to competitive advantage of firms at each stage of its developmental process through new technologies, new markets, allowing time for adaptation	Leads to Life cycle analysis	Need to re-aggregate overall effects on SEG (Societal, Environmental and Governance)
Marcus and Anderson, 2006	Strategic implications of CSR about firm's with dynamic capability with respect to societal and environmental drivers influence its' competence in CSR	Societal, Stakeholder and Environmental drivers may be used strategically	Identification of critical drivers

## 2.1 Shifting Paradigms and Stakeholder Relationships

The shifting paradigms are evident from the evolving codes for corporations. There is evolution from the original ‘spoke-and-wheel’ design of stakeholder interaction, through the interactive and responsive relationships, to the existence of stakeholders and firms in a business eco-system.

There is evolution from the ‘Business behavior for a better world’, popularly known as the Caux principles, to ‘compliance work for the improvement of operating results’, better known as Sarbanes- Oxley compliance. The issue of expansion faces the scrutiny of the community with regard to EHS issues. Firms are adopting an integrated route to CSR by utilizing the triple bottom line issues of economic profitability, societal equity and respect for the environment.

### **Table 2.2: The CERES Valdez principles**

**The Coalition for Environmentally Responsible Economies (CERES, 1992) adopted the Valdez Principles:**

- \* *Protection of the Biosphere:* Reduce and make continual progress toward eliminating the release of any substance that causes damage to the environment and human health.
- \* *Sustainable use of Natural Resources:* Make use of renewable natural resources and conserve them through efficient use and careful planning.
- \* *Reduction of disposal of Wastes:* Eliminate, or at least reduce, waste through reduction and recycling.
- \* *Energy Conservation:* Conserve energy and improve efficiency in all operations and every use of environmentally friendly and sustainable energy sources.
- \* *Risk Reduction:* Strive to minimize the environmental, health, and safety risks to employees and communities through safe technologies, facilities, and operating procedures.
- \* *Safe Products and Services:* Reduce and, where possible, eliminate the use, manufacture, or sale of products that cause environmental damage or present a health and safety hazard.
- \* *Environmental Restoration:* Promptly and responsibly correct conditions that endanger the environment, health, and safety.
- Informing the Public:* Inform, in a timely manner, anyone who may be affected by conditions which pose a potential hazard to the environment, health, and safety. Regularly consult with community leaders.
- \* *Management Commitment:* Ensure that the company's Board of Directors and chief executives are fully informed about pertinent EHS issues and are responsible for the company's policy.
- \* *Audits and Reports:* conduct annual audits to check implementation of these principles.

The Coalition for Environmentally Responsible Economies (CERES, 1992) adopted the Valdez Principles (Table 2.2) that established the principles of environmental ethics by which investors and the public at large can evaluate a company's environmental performance. They help the investors and the public at large to evaluate a company's environmental performance. These guiding principles are intended to develop programs that would prevent environmental degradation. Firms adopt these principles in order to move towards ecologically sustainable development to show their responsibility for the environment. The relevance of these principles is seen from adoption of environmental responsibility throughout the life cycle of the product and the entire supply chain.

The protection of the bio-sphere safeguards all habitats affected by the operations and preserve biodiversity. The use of natural resources ensures the sustainable use of water, soils and forests. Wastes would be handled and disposed in a safe and responsible manner. Energy conservation would improve the energy efficiency of firm's operations. Risk reduction strives to minimize the environmental, health and safety risks of employees and communities through the adoption of safe technologies. This is extended to offering safe products and services and restoring correct conditions of the environment and offering public advice and

counsel. All these initiatives are backed by the commitment of the management, proper audit and publication of reports.

Current organizations are characterized by distributed decision making, accelerated information flows, emphasis on innovation and focus on stakeholders. It was recognized by firms that stakeholders are persons or groups that have or claim ownership, rights or interests in corporations and their activities of the past, present or future (Clarkson, 1995). Subsequently the theoretical framework of stakeholder identification and salience was formed (Mitchell et al, 1997). The Information age has facilitated for 'Green GDP' wherein, firms in countries are viewed as business ecosystems. Organizations are less hierarchical and are characterized by more distributed decision making, accelerated information flows and emphasis on learning and innovation. In much the same way that the Ford Motor Company's assembly line was the icon of its contemporary age, societal expectations and stakeholder relationships integrated with the globally networked business model is at the vanguard of the information age (Castells, 2000).

The term 'stakeholder' is defined as 'any group or individuals who can affect or is affected by the achievement of a firm's objectives' (Freeman, 1984). Stakeholders are persons or groups that have or claim ownership, rights or interests in a corporation and its activities past, present or future (Clarkson, 1995). There are classifications into primary stakeholders and secondary stakeholders.

Primary stakeholders have interests that are directly linked to the performance of a company. They include shareholders and investors, employees, customers, suppliers, and neighborhood communities near the location of the company's operations. Some researchers (Wheeler and Sillanpää, 1997) have proposed that individuals and groups that speak for the natural environment, non-human species, and future generations, are also to be incorporated in this list of primary stakeholders.

Secondary stakeholders, on the other hand, have indirect influences on an organization or are less directly affected by its activities. They include the media and pressure groups. By constantly looking for innovative solutions to increasing environmental regulation, companies would be able to tackle the challenge proactively, which could make them more competitive.

The relevance of stakeholders as drivers is manifested from the public outcry on emotive issues such as HIV/AIDS in developing countries with respect to the access to certain pharmaceutical products from a narrow business point of view through the imposition of protection of patents and administered prices. Thus, Stakeholder engagement has become inseparable from company strategy (Moller and Erdal, 2003).

So far in this literature review through the linear search for the three constructs, viz, (i) shifting paradigms, (ii) societal expectations and (iii) organizational performance, precipitated additional variables like environment – competitiveness relationships. In case of the linear search, an array of literature on the subject is analyzed sequentially to look for relationships between the constructs. It is necessary to look for a refined conceptualization.

Considering Environmental and sustainability aspects, they are strategic for firms as they influence company reputation, products and competitiveness. The societal and stakeholder insights provide a lens for viewing trends in the operating environment and provide a pathway to develop new solutions (Andriof 2001). These are the enablers of long-term performance in terms of business opportunities. Collaboration with stakeholders stimulates absorptive capacity of an organization. Performance is reflected by corporate reputation and social licence to operate. Improved suitability for investment is derived from environmental and social performance factors. Understanding stakeholder expectations and addressing their concerns upfront reduces business risk thereby improving performance.

## **2.2 The business ecosystem of a firm**

Companies are embedded in a business framework amidst a web of stakeholders representing different and often conflicting interests. It is found that adopting stakeholder principles and practices results in a better economic performance (Donaldson and Preston 1995). For Dupont, their Sustainable Growth Report in fact helped them to develop new market opportunities and getting new consulting work. VanCity, Canada incorporates the expectations of its stakeholders into business planning that reflected in improving corporate performance.

The Stakeholder 360 is an approach for assessing and improving the quality of strategically important stakeholder relationships. This approach facilitates dialogue between corporate managers and stakeholders as ‘partners’. Just as there may be differences between an individual leader’s self-appraisal and an employee’s appraisal, lacunas may exist between the perceptions of company chiefs regarding leadership quality or organization effectiveness and the collective opinion of its employees, customers, suppliers or partners (Testa, 2002). Societal and Environmental Compliance are often common denominators for the stakeholders who evaluate corporate effectiveness. Thus the ‘Stakeholder 360’ approach leads to partial justification of this research study by linking societal and environmental compliance as drivers of competitive position of companies. Another way of looking at corporate competitiveness is to compare a company’s environmental performance with its economic performance. However, factors other than environmental performance may contribute to economic performance. A proactive environmental strategy may not always be linked to a positive competitive advantage, but depends on other factors in the general business environment. This means that the effect of environmental performance must be isolated from other factors influencing economic performance (Schaltegger and Wagner, 2003). Also, to measure the interaction between business activities and the environment, is complicated.

In a highly competitive environment, the ability of companies to meaningfully engage with critical stakeholders propels a company to innovate and respond to changing external demands more quickly and efficiently. The result is value creation. Though there are many benefits of good stakeholder relationships, two of the most important are innovation and social license to operate (Center for Innovation in Management, 2003). Thus, once the societal, environmental and stakeholder drivers are recognized and adopted into the company’s strategy, they could be monitored to yield competitive advantage. The effect of

stakeholder management on corporate performance was empirically tested with stakeholder management models. The results provide support for a strategic stakeholder management but no support for an intrinsic stakeholder commitment model (Berman et. al., 1999). Building better relations with primary stakeholders leads to higher shareholder wealth. These intangible assets develop sources of competitive advantage. On the other hand, when corporate resources are applied to non-core stakeholders, value is not created (Hillman and Keim, 2001)

### **2.3 Resource-based perspective on corporate societal, environmental and stakeholder action**

Although societal, environmental and stakeholder initiatives and business are linked, the precise mechanisms linking firms and society are yet to be specified (Wood, 1991). It has been forcefully argued that environmental regulation enhances economic performance in an efficiency-producing, innovation-stimulating symbiotic relationship (Fouts & Russo, 1997). Regulations are assailed as generating costs that businesses will never recover, representing financial diversions from vital productive investments (Walley & Whitehead, 1994). This inconclusiveness is primarily due to the inadequacy as to how the societal and environmental policies directly influence firms' bottom line.

The list of environmental concerns is diverse and includes conservation of fossil fuels, nature preservation, air and water pollution, control on pesticides, chemical fertilizers and genetically modified crops, global warming, biodiversity, depletion of the ozone layer and even spiraling population growth. Similar to the focus of this research on value, the environmental policy prescriptions also relate to values like prudence, social justice, aesthetics, economics and ethics.

The resource-based perspective views competitive advantage to be entrenched inside the firm, in the form of assets that are valuable and inimitable. Depending on the firm's capabilities or competencies to marshal these assets, results in superior performance and endows it with competitive advantage (Grant, 1991). Incorporating the external environment into the resource-based framework, acts as leverage to add value to the firm's resources. In other words, by nurturing internal competencies and applying them to an appropriate external environment, a firm can develop a viable strategy. For a firm's resource to become valuable, it must allow the firm to "exploit opportunities or neutralize threats" in the firm's environment (Barney, 1991). However, Hart (1995) expanded the resource-based view of the firm. He viewed external stakeholders as playing a pivotal role in moving corporations toward sustainability. The societal, environmental and stakeholders demands facing a firm motivate the firm to develop unique resources which are valuable and inimitable. The inimitable resources assume significance in the context of the knowledge economy, where involvement with stakeholders enables companies to develop ideas, demonstrate business technologies and to find new markets.

### **2.4 Reporting and Performance of firms**

Corporate Societal, Environmental and Stakeholder Performance Reporting or sustainability reporting is increasingly recognized as a catalyst for change both internally (in terms of informing management learning and decision making) and externally (to influence stakeholder perceptions) (Burns, AccountAbility, 2003). Economic impact will become the determinant as to how society judges multinational companies. Collective partnerships between companies and advocacy groups like NGOs, investors, governments, trade unions, will be essential to delivering desired societal and environmental changes. Some of the recognized reporting initiatives are: GRI (Global Reporting Initiative), AA1000S (Assurance Standard), EMAS (Eco Management and Audit Scheme), SA8000 (Social Accountability 8000). However, the Global Reporting Initiative offers the most comprehensive array of sustainability themes and metrics and is increasingly gaining the acceptance of the international business community (AccountAbility and Business for Social Responsibility, 2003).

## **2.5 An empirical approach to Competitive Advantage of firms**

Environmental ratings are usually based on a number of criteria, such as compliance records, expenditures, waste reduction, and support of environmental protection organizations. The dependent variable was the company's return on assets (ROA). The control variables were industry concentration, firm growth rate, firm size, capital intensity, research and development intensity, advertising intensity, and market share, (Capon, Farley, & Hoenig, 1990). The correlations are generally low, with the exception of the relationship between the firm growth rate and ROA. Certain Corporate Social Responsibility behaviors were strongly correlated to Return on Assets (Berman et al, 1999). For example, value can be created in three ways: increasing the Return on Capital Employed, decreasing the Cost of Capital or increasing return on assets. There are of growing companies reporting increasing profits while actually destroying value. Wal-Mart's profits were high, but yet they stopped expanding due to the fact that the expansion period showed negative EVA. By linking corporate social responsibility to value-based management gives rise to the framework linking the three resources of people, raw materials and capital. These are used by every company. The better manner in which the resources are used the higher the value a company creates.

The Dow Jones Sustainability Index, the Innovest EcoValue Index and the Jantzi Social Index measures correlations between social and environmental performance and stock price performance. These indices include the social dimension and they equate social performance with observers' subjective ratings of actual corporate behaviors. In order to garner additional investor support for CSR within companies, there is a strong necessity to underpin the added value derived from Societal and Environmental performance in economic and strategic terms. The Triple Value Strategy (Cramer et al, 2004) aimed to assess the financial benefits of Corporate Social Responsibility for firms. In the context of determining value of CSR, three aspects are important for companies: economic performance, by which economic efficiency is augmented through environmental and societal innovations; reputation value, through protection and enhancement of the company's reputation vis-à-vis the community and parenting advantage, to benefit from being a part of a larger entity. Corporate social responsibility has an impact on all three.

Stakeholder value creation may be operationalized as Economic Value Added (EVA). While arriving at the present research methodology, it was found that as good sustainability performance could lead to improved financial results, good financial results could permit or motivate a company to invest in improved sustainability initiatives. A study by Morgan Stanley in 2003 indicated that shares of companies with good sustainability records perform better than those of less socially responsible firms. The best sustainability compliant firms outperformed the laggards by 23.4 percent (Fittipaldi, 2004). Companies are increasingly accepting the premise that sustainability is a value-added factor. Corporate citizenship along with Competitiveness and Governance, are becoming the mainstay of building Competitive advantage. Sustainability practices need to be tangible and cohesive. It is here that Economic Value Added (EVA) comes in. Economic Value Added hinges on facts and figures derived from numerical analysis. Sustainability indices depend in dialogues, relationships and intrinsic values. Value Based Management concepts integrates the intangible to the tangible.

## **2.6 The Triple Bottom Line approach**

The triple bottom line model for sustainability, i.e., a company should have measures of economic, environmental, and societal performance, augment Competitive Advantage. Most businesses compete on either price, level of quality or service to generate a competitive advantage. The value of service and societal benefits also contributes to competitive advantage. The ‘triple bottom line’ (TBL) reporting has created new challenges for corporations. The Global Reporting Initiative (GRI) has recently revised its performance indicators, which include economic, environmental and social goals and performance against benchmarks, targets and industry norms. TBL activates Societal and Environmental compliance strategies with innovative responses that improve the performance of corporation (Burns, 2003). For instance, 3M introduced the Pollution Prevention Pays (3P) program. 3P helps to prevent pollution at the source through product reformulation and process modification, rather than removing it after it has been created (3M, 1999).

Corporate Societal and Environmental Reporting catalyzes change, both internally, in decision making and externally, influencing stakeholder perceptions (Burns, 2003). The Market Value Added (MVA) is unique in its ability to capture shareholder value creation because it includes both the valuation of the shareholder benefits and performance indicated by the overall quality of capital management (Stern Stewart, 1996). MVA is the difference between the cash that both debt and equity investors have contributed to a company and the value of the cash that they expect to see in return. MVA is the appropriate choice for assessing competitive advantage because it captures shareholder value creation without being subject to the shortcomings of accounting measures.

If the total market value of a company is more than the amount of capital invested in it, the company has managed to create shareholder value. Economic Value Added for a firm emphasizes earning a return greater than the cost of capital. The relationship between MVA and EVA is relevant. Market Value Added is equal to the present value of all future EVA. The market value of a firm reflects not only the expected EVA of assets in place but also the expected EVA from future projects. EVA is chosen as the preferred assessment of

competitive advantage because the independent variables, i.e., Societal, Stakeholder and Environmental drivers, are based on survey at a specific point in time and do not take the future values of the return into account, which is a requisite for MVA.

## 2.7 Economic Value Added (EVA)

Competitive Advantage is operationalized in terms of present performance as Economic Value Added (EVA) (Dillon and Owers, 1997). EVA is defined by the product of the difference of Operating Return on Assets and Cost of Capital times the Average Operating Assets. EVA is a measure of value created in firms that compares the return from operations with the cost of financing those operations. EVA has an equivalent expression as the difference between Net Operating Profit After Tax and the Cost of Financing. Measures like Net Present Value and Discounted Cash Flow are less suitable for overall performance evaluation as they are based exclusively on cash flows. While, other indices like Cash Flow Return on Investment (CFROI) and the Return on Invested Capital (ROIC) are limited, as the cost of capital is not considered.

EVA is a measure of value created which compares the return from operations with the cost of financing those operations (Dillon and Owers, 1997). Basically, EVA states that the return from using funds must exceed the cost of those funds in order for value to be created (Table 2.3).

**Table 2.3: Definition of Economic Value Added**

<p>The following relationship defines EVA:</p> $EVA = [OROA - COC] AOA$ <p>Where, OROA = Operating Return on Assets COC = Cost of Capital, AOA = Average Operating Assets</p>
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*Source: Dillon and Owers, 1997*

## 2.8 Competitive Advantage assessed by Economic Value Added (EVA)

Competitive advantage is viewed from different perspectives in literature. In this study it will be value added. The value added concept by Barney (2002) which states that a firm derives competitive advantage when its actions in an industry or market create economic value better than competing firms engaged in similar actions. Kay (1993) postulates that a distinctive capability of a firm becomes a competitive advantage and is measured as valued added over the cost of capital. Economic Value Added is performance that incorporates the cost of capital. As Competitive Advantage relates to key internal and external resources like the capacity to innovate, reputation and strategic assets between competing firms and as improvement in these factors leads to higher EVA, this can be assessed by EVA. EVA improves when the ecological 'footprint' of material and energy use is reduced, by designing environmentally friendly products that helps to differentiate products. The cost of capital is

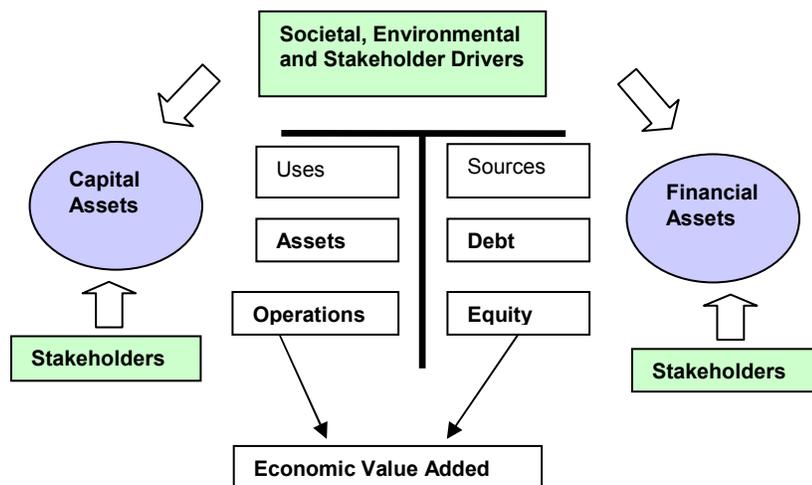
lowered through the process of waste elimination, process simplification and improved asset utilization.

## 2.9 Societal, Environmental and Stakeholder drivers and EVA

Linking societal and environmental drivers to value-based management assessed by EVA, leads to a consistent framework. The societal, shareholder and environmental resources could be managed to create value. The better the resources are deployed, the higher the value a company creates. For instance, DuPont has adopted a companywide sustainability indicator, indexed by shareholder value added per unit weight of the product. This maintained the goal to create higher Economic Value Added with fewer resources. For Dupont shifting operations from a traditional, resource-intensive, and volume-maximizing business model to the corporate social responsibility driven model increases shareholder value. This reduces Dupont’s volatility of the overall stock market and creating EVA (van Dam and Kim, 2003).

But, in general for a company, the concept of EVA needs to be quantifiable at the operational level. This enables managers to establish a link with their daily activities with regard to Societal, Stakeholder and Environmental initiatives and the creation of EVA. For instance, at KLM airlines, EVA is disaggregated into a ‘value levers’ with quantifiable Societal, Environmental and Stakeholder targets. For the KLM Cargo division it is determined that the ‘reduction in absenteeism’ and ‘energy use’ cause a positive change in EVA (Van Dam and Kim, 2003). As the company could give to the operational level discrete, measurable indices to work upon, the aggregate result may be impressive and would reflect in the EVA.

**Figure 2.1 Societal, Stakeholder and Environmental drivers and Economic Value Added**



Source: adapted from Dillon and Owers, 1997; Stern and Stewart, 1991

Figure 2.1 illustrates that Firms receive their resources from investors and creditors who have ‘expectations of return on investments’. These become the ‘cost of funds’ for the firm. The relationship of EVA to familiar attributes of the balance sheet facilitates ‘value creation’. Examining the change in EVA year-on-year reflect changes attributable to economic, societal and environmental actions for the prior year rather than total capitalization across time which

is explained by MVA. The Economic Value Added (EVA) is a financial fundamental that reflect the measurable economic performance used in value-based management. The societal and environmental initiatives will be reflected on the firm's EVA. Firms try to differentiate by increasing economic efficiency through environmental and societal innovations. The Body Shop and Ben & Jerry's have pioneered on environmental and societal initiatives that etched their unique image among consumers and investors on issues as corporate discrimination, fair trade, recycling of production and product waste.

A company's good reputation result from Societal and Environmental initiatives that relate to sustainable investment portfolios in the capital market. research shows that a 60 per cent change in reputation translates into a 7 per cent change in market value (Srivastava, 1997). New production techniques can reduce the amount of capital that needs to be employed. Green production has the potential to reduce costs substantially through sustainable investments, resulting in less cost of capital.

Societal and Environmental drivers could improve the efficiency of the resource. Enhanced employee satisfaction is achieved through community based involvement. Cost of resources is influenced by the Stakeholder and Environmental drivers through use of renewable resources and sustainable responsible investment. The growth of resources also affects the EVA. The Societal, Environmental and Stakeholder drivers encourage the usage of eco-efficient technologies and product stewardship (Kim and van Dam, 2003).

## **2.10 EVA: high and low positive, negative**

EVA is computed as the difference between Return on Capital Employed (ROCE) and the Weighted Average Cost of Capital (WACC), multiplied by the Capital Employed. Additional value is created when the ROCE exceeds the Weighted Cost of Capital. Here, the Cost of Capital reflects the minimum acceptable rate of return. Therefore, EVA may be classified as positive or negative. Furthermore, positive EVA could be broadly grouped to high positive and low positive depending on the absolute figure. These may be interpreted based on the method of calculation of EVA explained above. When the Return on Capital Employed (ROCE), which depends on the income and performance factors, exceeds the Cost of Capital (COC), positive EVA generates. The quantum of positivity depends on the extent to which ROCE surpasses COC. When it is quite high, a high positive EVA is generated, and when it is small, a low positive EVA, results. For some firms, this value could be high depending on the interaction of a number of parameters, like, economic situation, raw materials and resource prices, implementation of efficiency and cost reduction programs, new marketing activities and the Corporate Social Responsibility initiatives. In case when ROCE is lower than COC, there is negative EVA.

Classifying EVA into high positive, low positive and negative, opens up strategic choice for firms. In the context of the set of drivers, the effect of societal, environmental and stakeholder drivers could be different for firms with high positive, low positive or negative EVA. Firms could analyze the CSR initiatives that resulted in low or negative EVA. Initiatives on sustainability, including life cycle analysis, elimination of unsustainable products and environmental impact corrective measures like commitment to sustainability

and limiting toxic wastes, could require high investments that have longer term returns. This could cause negative EVA. This analysis could lead to establish a balance between value generators like Societal, Environmental and Stakeholder drivers and cash providers like marketing.

## **2.11 Societal, Environmental and Stakeholder drivers in International firms**

The concept of Societal, Environmental and Stakeholder drivers are indicators for measuring, accounting, auditing, reporting and verification of different aspects of sustainability (GRI, 2000). The drivers could lead to cost reduction, risk mitigation, market advantage, regulatory flexibility and corporate image. However, the core driver is long term sustainable business policy that addresses societal and environmental compliance.

Corporate reputation is emerging as the overall determinant of value for firms. All other aspects like profitability, innovation, technology are supportive factors that build reputation. It may be stated that the society is entering the era of corporate image, in which consumers will increasingly make purchases on the basis of a firm's whole role in society: how it treats employees, shareholders, and local neighborhoods. As a social issue, environmental concerns are somewhat unique in terms of how strongly they appear to be manifested in the marketplace. This occurs because environmental concern correlates strongly with income, and therefore with purchasing levels (Roper Organization, 1990).

It has been found (Ramus, 2002) that there is connection between environmental performance and economic performance in higher-growth industries. Prospering under such conditions will demand innovative thinking. This is achieved through is "eco-renewal" and find ways to improve industry growth through environmental initiatives. Such a renewal would benefit a firm not only directly, but also indirectly, by changing the nature of the competition it faces in ways that enhance returns to its resource base.

## **2.12 Societal, Environmental and Stakeholder drivers' link to performance**

The relevance of Corporate Social Responsibility (CSR) to firms as a Strategic option and CSR's 'dynamic capability' to influence the firm's strategy forms the basis of the methodology of this study. Stakeholder engagement is often addressed through innovations which affects strategy.

The drivers' link to performance provided the research scope to look for a framework of criticality of stakeholders. As the stakeholder, environmental and stakeholder drivers influence the performance of the firms, they could be utilized as a supplementary mode of improving the competitive position of firms. Often the product/ service/profitability led frameworks may not provide the differentiators with respect to competition. Therefore, the societal, environmental and stakeholder drivers could be modeled in a framework to be utilized to supplement the product/ service / profitability framework. The two could be

deployed in tandem for maximum benefits. This research aims to develop such a framework. Freeman's stakeholder theory (1984) asserts the presence of constituents like workers, customers, suppliers and local community organizations who influence the firm's outcomes. These constituents evolved to become drivers. The Stakeholder theory was expanded by Donaldson and Preston (1995) who posited that companies are embedded in a business ecosystem and needed to adopt stakeholder engagements to derive business advantages. The corporate performance of a company is also influenced by the societal, environmental and economic measures (Schaltegger and Wagner 2005). Environmental and societal issues influence several market competitiveness and performance aspects like higher willingness to pay, increased market share, customer loyalty, material and resource savings, motivated staff and increased innovation rate. Triple bottom line model for sustainability, stipulating that firms should be economically, environmentally, and societally responsible, provides for various drivers (Burns, 2003). The estimation of the intangibles from literature needs refinement and this 'gap' needs to be filled in. The business models appear to be skewed towards the achievement of economic performance. The dynamic capability of Societal, Stakeholder and Environmental drivers have strategic implications on the firm's performance (Marcus and Anderson, 2006) call for the identification of critical drivers.

### **2.13 The Role of Drivers**

Improved competitiveness could be derived from societal, environmental and stakeholder drivers. Competition compels firms to undertake societal, environmental and stakeholder initiatives. In addition to the focus on business relating to financial performance, the firm management demonstrates societal, environmental and stakeholder responsibility, often voluntary, that move beyond compliance. Firms respond to the criticality of stakeholders for societal and environmental initiatives. This relationship depends on societal initiatives, environmental drivers and economic performance responding to stakeholders. These should be specified to identify the impact of each driver on performance (Schaltegger and Wagner, 2003).

In a competitive environment, the ability of companies to meaningfully engage with critical stakeholders propels a company to innovate and respond to changing external demands more effectively. Innovation helps firms to maintain their competitive advantage by making them 'inimitable'. The result is value creation. This creates a positive image in the minds of the stakeholders and firms gain social legitimacy (Center for Innovation in Management, 2003). Societal, Environmental and Stakeholder drivers stimulate innovation such as the introduction of bio-fuel and hydrogen as alternative energy technologies for transportation and wind and thin-film solar for electricity generation (Shell, 2005). Competition in business results in firms adopting drivers that differentiate their strategic position vis-à-vis the competitors. As stakeholder engagement facilitates economic performance, firms respond to drivers through societal and environmental initiatives such as the 'elemental chlorine-free bleaching' for paper introduced for packaging (McDonald's 2005). Stakeholder engagement is an innovative way that could be inimitable because of the unique relationship with the company.

Societal and Environmental drivers contribute to a firm's performance in a variety of ways. Tangible contributions include risk reduction and profitability improvements, while intangible contributions lead to brand equity. The environment benefits through cleaner process and products, the local community benefits from socio-economic development, employees gain better working conditions and consumers receive quality products with less impact on the environment.

## **2.14 Managing for Environmental Quality and Economic Performance**

One key issue for corporations is how to treat existing environmental standards. There is evidence that many corporations regard pollution limits as minimums and try to exceed minimal compliance levels and position themselves for future changes in policy. Another reason to go beyond compliance is that the organizational innovation with which such a strategy is associated is well matched to the trend in environmental regulation itself. The pattern of regulatory legislation in America appears to be evolving from one of "command and control" to one that uses market-like mechanisms, such as tradable emissions permits, to achieve environmental gains (Hahn & Hester, 1989). Such a trend will benefit firms that have promoted flexibility in their approach to environmental policy, because using market tools to improve the environment allows firms to tailor their responses to their own needs. More generally, however, we believe that moving aggressively toward environmental improvement will help firms to become more entrepreneurial on a number of key dimensions that we have noted above (Russo and Fouts, 1997).

EMS is a management system that plans, schedules, implements and monitors those activities aimed at improving environmental performance. ISO 14000 standards is the best example of a structured EMS. A firm may take one of the four positions while conforming to its EMS. Reactive firms have compliance strategy, and require corrective environmental management action as regulations and norms change. Proactive environmental policies seek immediate corrective environmental management action as regulations and norms change and try to anticipate these changes. Crisis prevention usually entails environmental management actions due to public exposure, where there are continuous emergency monitoring procedures and immediate intervention if an emergency occurs. Finally, Strategic policy should include continuous improvements to environmental management actions in all aspects of business activity toward pollution prevention and waste elimination. An Arthur D. Little survey of executives at 115 large North American businesses found that 61% expected meeting ISO 14000 requirements resulted in competitive advantage (Sroufe et al, 1998).

## **2.15 Sustainability and the Competitive Advantage**

The concept of competitive advantage has become a significant determinant of performance as firms have been forced to respond to global competition and economic recession by continually seeking cost savings and greater efficiency in order to attain an attractive relative position vis-à-vis its best rivals. Two competing models of competitive advantage are: the first is grounded in traditional economic theory and the industrial organization tradition,

where competitive advantage is ascribed to external characteristics rather than to the firm's internal features (Porter, 1981; Prahalad & Hamel, 1990). The second model is rooted in a resource-based view of the firm whereby specialized resources are deployed to attain a privileged market position (Barney, 1986).

The term 'sustainability' propitiates value creation for firms, as well as for their stakeholders, in economic, social and environmental terms. This approach is based on the premise that corporate performance should be assessed against a 'triple bottom line' of economic development, environmental quality and social justice or equity (Elkington, 1997).

Environmental or sustainable development considerations are being seen in a strategic business context, one that augments Competitive Advantage. Research shows that the inclusion of sustainability issues in corporate mission and values statements - particularly in larger companies - is becoming more common and there is a parallel increase in measuring, reporting and communicating on such issues in real time (Wheeler and Elkington, 2000). The sustainability issues encompassing ethical finance, the heightened interest of consumers in adopting certified sustainable products and services, and the pressure on supply chain partners to demonstrate environmental and social responsibility, are becoming mandatory (Elkington, 1998; Beloe, 2000). Finally, the magnitude of sustainability issues, such as global climate change, population growth, and economic globalization, means that companies which are not ready for major instability in marketplaces and political regimes may see their competitive advantage eroded and their business success threatened (Hart and Milstein, 1999).

Companies have varying postures towards adopting the sustainability agenda. Hence, it is worthwhile to examine the levels of corporate response to stakeholders, their distinctions between various orientations so as to better understand the role that certain kinds of stakeholder relationships play in the creation of societal value and competitive advantage. The three tier model for corporate social responsibility (Sethi, 1975) propounded:

Tier 1: social obligation (a response to legal and market constraints): ensuring safety of products and workers, avoiding economic losses, corruption and (illegal) environmental damage;

Tier 2: social responsibility (congruent with societal norms): achieving good levels of customer satisfaction, employee morale, returns to investors and reducing environmental impacts of operations, products and services;

Tier 3: social responsiveness (adaptive, anticipatory and preventive): achieving simultaneous sales and stock value growth, customer and employment growth and eliminating or offsetting environmental impacts.

In this framework, an ascent from tier 1 to tier 2 mandated a company to move 'beyond compliance' and to internalize societal expectations. Accordingly, to transcend to the third tier required a company to develop the competence to 'navigate uncertainty, maximize opportunity and engage effectively' with external stakeholders on issues and concerns.

## **2.16 Stakeholder-Focus and Performance**

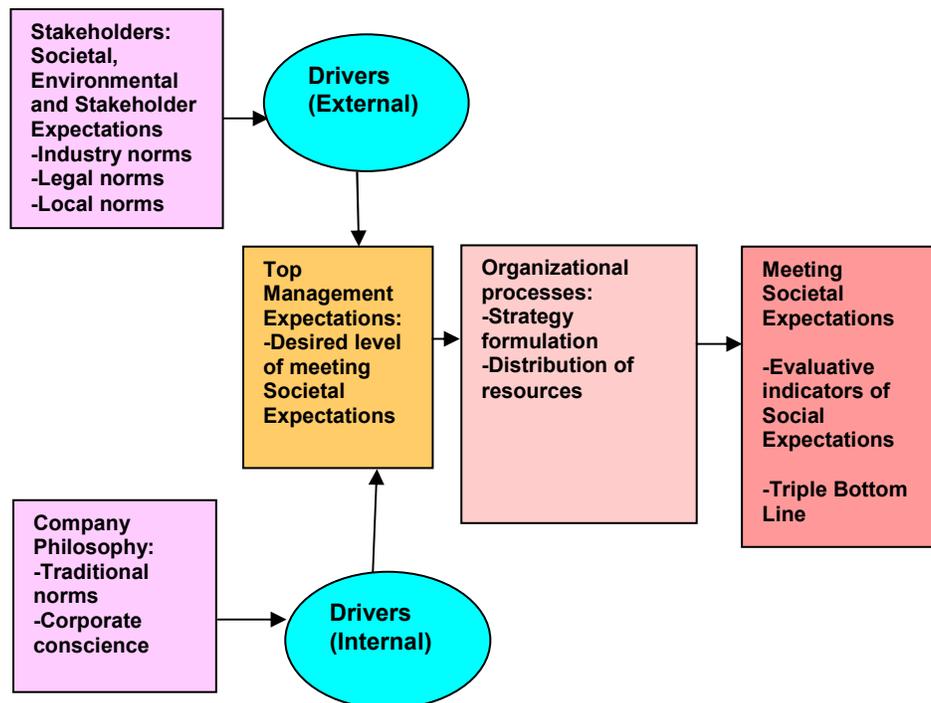
A positive relationship between Corporate Social Performance (CSP) and financial performance has been identified (Preston, 1978). This research supports the view that the cost of having a high level of corporate social responsibility is more than offset by the increased benefits in employee morale and productivity. In a number of recent studies, the firm's corporate reputation has been used as a measurement of CSP (Thomas and Simerly, 1994). The firm's corporate reputation is based on Fortune's Corporate Reputation Index. Using the Corporate Reputation Index, a positive relationship was found between CSP and financial performance (Stanwick, 1998).

Research shows that there seems to be a strong correlation between good stakeholder relationships and business success in terms of Competitive Advantage generation. Arie de Geus (The Living Company, 1997) expressed that stakeholder-oriented companies maintained harmony with their environment by emanating “feelers” out to activist groups and by developing strong relationships. Firms that place a premium on ethics and social performance make the most money (Clarkson, 1991). Certain Corporate Social Responsibility behaviors were strongly correlated to Return on Assets (Berman et al, 1999). Company strategy that included certain postures towards communities, minorities and women and the natural environment exerted a mediating effect on selling intensity and capital expenditure efficiency. The Dow Jones Sustainability Index, the Innovest EcoValue Index and the Jantzi Social Index measures correlations between social and environmental performance and stock price performance. Though these indices include the social dimension, their measurement is not based on the quality of stakeholder relationships. Rather, they equate social performance with observers' subjective ratings of actual corporate behaviors. The hypothesis needs to be investigated that the ability to create and sustain high quality stakeholder relationships is a necessary management competence, without which financial success becomes unlikely. In any case, the fact that such correlations exist does provide some empirical evidence for the existence of links between social and financial performance

## **2.17 Model of Societal, Environmental and Stakeholder drivers**

This distinct characteristic requires businesses to align their activities with the principles of sustainable development and societal expectations (Figure 2.2). The framework is explained in terms of principles of Corporate Social Responsibility, process of Societal, Environmental and Stakeholder responsiveness and Outcomes of Corporate behavior in terms of impacts, programs and policies. The principles of Corporate Social Responsibility state that the society grants legitimacy and power to business, leading to relationship between business and society. Carroll's four-part categorization of social responsibility (chapter 2, page 12) and the classification of firms as reactive, defensive or responsive (Sethi, 1979) serve to be the basic building blocks for the model of Societal, Environmental and Stakeholder drivers (Figure 2.2).

**Figure 2.2: Model of Societal, Environmental and Stakeholder drivers**



*Source: Author's own*

The economic part covering profitability maintains growth, the legal norms provide legitimacy, ethical orientation, leads to right behavior and commitment, prompts beyond compliance behavior. As depicted in the model, the Societal, Environmental and Stakeholder Expectations, industry norms and legal regulations act like drivers. The process of Societal, Environmental and Stakeholder responsiveness specifies that businesses are responsible for the outcomes caused by firm activities. The firm responds to the drivers by adapting the company philosophy, norms and corporate conscience. They redefine the top management expectations, reorient the organizational processes and fine tune their strategy formulation. The outcomes of corporate behavior calls for every domain of corporate interaction with the stakeholders are obliged to act with appropriate discretion that result in socially responsible outcomes. This is depicted in the model as proper distribution of resources and meeting societal expectations. All these affect performance that is evaluated by societal, environmental and stakeholder indicators.

## 2.18 Defining the Drivers: why Societal, Environmental and Stakeholder Expectations may become drivers of Competitive Advantage?

Drivers act as the prime mover of initiatives that add momentum to overcome the inertia. The definition of ‘driver’ in the context of societal, environmental and stakeholder expectations is sought from the Global Reporting Initiative, and it refers drivers as indicators for measuring, accounting, auditing, reporting and verification of different aspects of sustainability (GRI, 2000). For instance, brand image and reputation are key value drivers of sustainability performance. The drivers enhance the rigour, leverage and utility of the societal, environmental and stakeholder initiatives. Recent trends have shown changing context of competitive advantage through the appropriate utilization of drivers (Table 2.4).

**Table 2.4: The Key trends of changing competitive advantage**

<p><b>Key economic trends leading to formation of external drivers:</b></p> <ul style="list-style-type: none"><li>- There is a massive transfer of assets to the private sector</li><li>- Size of the markets have grown with over 3.5 billion people to market economies</li><li>- There is evidence of increased global integration and competitiveness</li><li>- Tremendous impact of new technology and there is rapid pace of innovation</li><li>- Mergers, restructuring and acquisitions are the order of the day</li><li>- There is a virtual war for owning talent as in a knowledge economy</li><li>- There is increased economic uncertainty and risk</li><li>- More than ever there is a growing importance of intangibles</li></ul> <p><b>Cap Gemini Ernst &amp; Young Value Creation Index:</b></p> <ul style="list-style-type: none"><li>- Lists the effect of these emerging drivers.</li><li>- The Value Creation Index includes: innovation, quality, customer relations, management capabilities, alliances, technology, brand value, employee relations, and environmental and societal issues.</li><li>- Reiterates the fact that the Societal and Environmental issues have become integral drivers to the value creation of firms.</li></ul> <p><b>Emerging key Intangibles leading to formation of external drivers:</b></p> <ul style="list-style-type: none"><li>- Changing public sector policies and frameworks</li><li>- Over 60,000 global NGOs and activist groups</li><li>- Proliferation of online global media like CNN, FTSE and Internet</li><li>- Research information on critical social, governance and environmental trends</li><li>- Rising expectations and pressure to build accountability and societal entities</li></ul>
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*Source: Nelson, 2002*

One trend is to harness innovation for the public good. Firms like 3M, Dupont and Toyota translate innovations into opportunities. They integrate societal, environmental and stakeholder considerations into new product concepts. For instance, Toyota’s hybrid synergy vehicle combines electric motor and gasoline engine meeting emission standards for super ultra low levels (Toyota, 2005). This distinctly created superior competitive advantage to the firm. Additionally, 3M recycled scrap from X-ray film to be used as the base material for X-ray films that can develop finished X-rays without the use of chemicals (3M sustainability report 2004), thereby bringing down costs substantially. A Softer Touch recyclable foam developed by Dow Chemicals facilitates shipment of critical parts as well as helpful in protecting the environment as it may be recycled and is CFC free (Dow Chemicals, 2004) adds to the acceptability of the product.

The trends indicate that firms are becoming strategic about the different drivers. Some of the strategies applied to deploy different drivers are putting people at the centre, spreading economic opportunity, engaging in new alliances, practice superior governance and pursue projects beyond profit (Jacjson and Nelson, 2004). Firms are endeavoring to create niches through the adoption of specific drivers. They are developing business strategies leveraging the drivers that have significant impact so as to generate competitive advantage (Strandberg, 2002). Nowadays, investors are evaluating firms not only based on financial accomplishments, but on societal, environmental and stakeholder value drivers.

For instance, as there is increased global integration, greater impact of new technology and rapid pace of innovation, the Value Creation Index is adhered to by companies. The popular Cap Gemini Ernst & Young Value Creation Index include criteria like innovation, quality, customer relations, management capabilities, alliances, technology, brand value, employee relations, and environmental and societal issues. Mergers, restructuring and acquisitions are becoming increasingly pertinent, analysts are examining how CSR considerations affect corporate business practice in their due diligence studies.

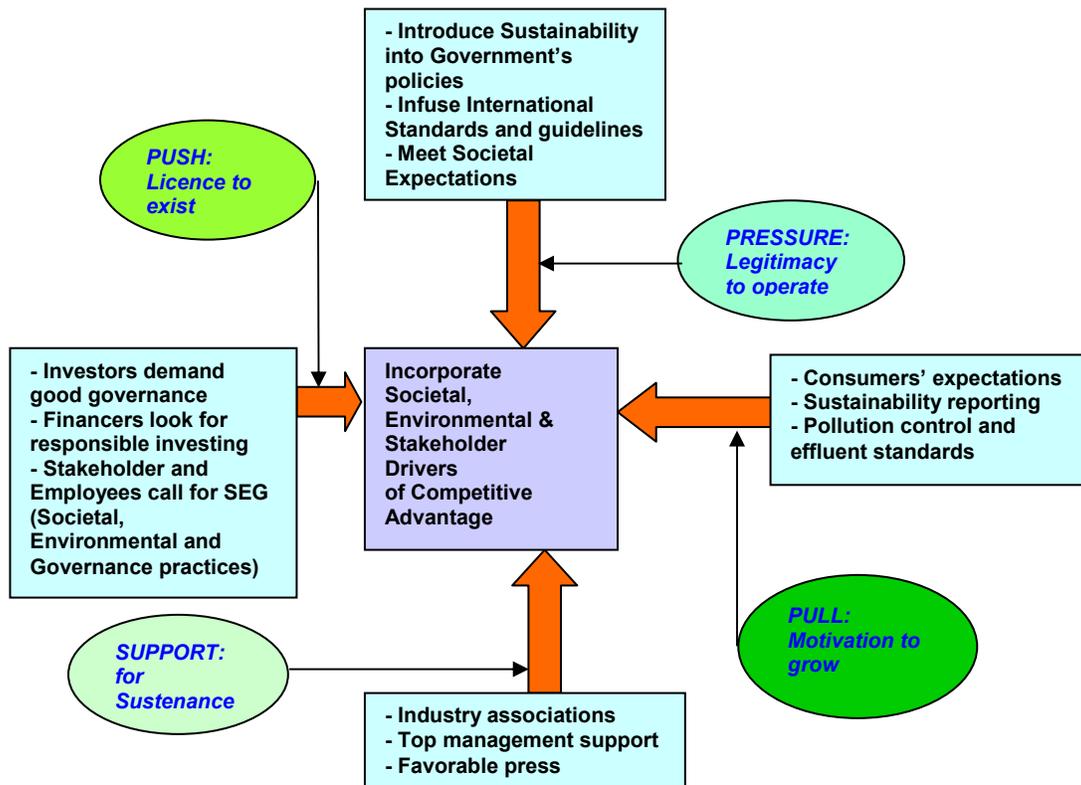
The Cap Gemini Ernst and Young Value Creation Index assess the value of innovation to be one of the key factors of corporate value creation. They proposed that the innovation spectrum interplays with creative process, impact and distinctiveness. The innovative firms need to perform in four facets of innovation types, i.e., offering, process, strategy, and structure. The offering at Philips is the Xenon Lighting automotive systems that eliminate mercury. The process is through 'Green Flagship product innovation'. The strategic approach is creation of symbiotic linkages with the structure of leverage through international partnerships and collaboration with BMW and Toyota.

The prominent regulatory drivers that lead to the formation of drivers include new regulatory and fiscal frameworks shifting from disclosure requirements to social and eco-taxes and subsidies; new voluntary initiatives like the Global Reporting Initiative and the Global Mining and Ethical Trading Initiatives; and new market mechanisms emerging from emissions trading to sustainability indices.

The PriceWaterhouseCoopers (PWC) Global CEO Survey 2002 found that 68 percent of CEOs felt sustainable development/ corporate responsibility would be an increasingly important factor in determining profitability. This view is endorsed in the PWC survey of 2005 which revealed that effective Governance, Risk Management and Compliance (GRC) would achieve significant benefits outweighing costs, provided their implementation is proper. The findings show that CEOs in Asia have more positive perceptions of the strategic application of Societal, Environmental and Stakeholder drivers than those in the U.S. and Europe. About 89 percent of the CEOs in Asia agree that effective CSR practices provides value and competitive advantage, as compared to only 60 percent of the CEOs in U.S. and 72 percent of the CEOs in Europe held similar views. The survey focuses on eight elements that are basic to Societal, Environmental and Stakeholder effectiveness. They included factors like codes of conduct, compliance and ethics training, ongoing process improvement, monitoring and measurement of drivers.

In order to incorporate Societal, Environmental and Stakeholder Expectations into Corporate Practices, one needs to model the firm in the market and organizational environment (Figure 2.3). The model enunciates that firms as an organizational entity partially overlapping with a nexus of markets. Various influencers exert ‘push, pressure, support and pull’. The government and regulating agencies ‘push’ firms to acquire licence to exist. The customers and suppliers wield pressure urging firms to attain legitimacy and reputation. The resources including employees provide support for sustenance while developing expectations for the firm to be the employer of choice. The investors urge the firm to grow by applying the ‘pull’ through responsible investments. These ‘externalities’ include the introduction of sustainability into policies, infuse international standards, meet societal expectations and introduce sustainability reporting. In addition to these, internal drivers comprise top management support, employee adherence to Societal, Environmental and Governance practices.

**Figure 2.3: Drivers to incorporate Societal, Environmental and Stakeholder Expectations into Corporate Practices**



Some firms are publishing societal and environmental reports that are strategic in nature. Amidst rising expectations of stakeholders, firms are providing a gamut of information. In contrast to financial reports, there are fewer consensuses as to how environmental reports are to be presented (Kolk, 1999).

Reporting and accounting with regard to CSR practice involves considerations such as ‘what issues to engage in’ and ‘how to develop responsible policies and practices within different areas of CSR’. Standards include both auditable standards as well as broad guidelines, codes

of conduct, charters, investment screening mechanisms and benchmarks. Within the field of CSR, most standards are of a voluntary nature. The CSR-related standards incorporate principles, collective codes of practice that are voluntarily adopted.

The UNEP Sustainability Report is a benchmark for Guidelines on sustainability reporting, that help companies achieve better disclosure and reporting. They focus on environmental parameters and are scored using six categories: management policies and systems, inputs and outputs, finance, stakeholders' relations and partnerships, sustainable development and report design and accessibility. The UNEP/ Sustainability aims to document firms' progress in environmental reporting and highlight best practice. The UNEP Sustainability report has a prescriptive focus on sustainability, i.e., in which business is assumed to play a larger role.

Deloitte Touche Tohmatsu (Deloitte Touche Tohmatsu, 1999) developed a corporate environmental report card for firms to use as a benchmark tool. It consists of eight categories: corporate profile, report design, environmental impact/data, environmental management, finance/ eco-efficiency, stakeholder relations, communications and third party statement. The Deloitte Touche Tohmatsu emphasizes principles of environmental reporting, especially relevance, reliability, reliability, materiality and consistency.

Various standards like the Global Reporting Initiative, the United Nations Environment Program (UNEP), the World Business Council for Sustainable Development (WBCSD), the UK Association of Chartered Certified Accountants (ACCA), Eco-Management and Audit Scheme (EMAS), Social Accountability 8000 (SA 8000), Dow Jones Sustainability Group Index (DJSGI) and AccountAbility 1000 Series, could be broadly grouped based on their four key ways of working (Moller and Erdal, 2003): (i) code and practice and guideline based: the UN Global Compact, the Ethical Trading Initiative and the Global Sullivan Principles; (ii) based on auditable management systems guidelines and certification schemes: the organization based EMAS, the site based SA8000 and the product based Forest Stewardship Council's Principles and Criteria for Forest Management (FSC); (iii) formatted on Rating indices that aids the socially responsible investors: FTSE4Good and Dow Jones Sustainability Group Index; and (iv) based on accountability and reporting frameworks: Global Reporting Initiative and AccountAbility1000 Series. The GRI does not specify levels of performance that must be met, but provides a framework for communicating and responding to stakeholder concerns in relation to societal, environmental and economic performance (Table 2.5).

The International Organization for Standardization (ISO) and ISO style standards which are voluntarily adopted by companies and regulated by a system of third party accreditation bodies. In a recent initiative, ISO 26000 standards are being drafted. Also coined as SR 26000, these standards focus on redistribution of resources, incomes, benefits and responsibilities leading to 'sufficiency economy'. So far three rounds of discussions have taken place at Salvado, Brazil in March 2005; Bangkok, Thailand in September 2005; Lisbon, Portugal in May 2006. The next round is planned for Sydney, Australia in early 2007. Some significant highlights include the formation of National Mirror Committees and Twinning Arrangements to deliberate on whether to necessitate certification and to hand-hold pairs of countries to partner with each other to develop a common framework.

**Table: 2.5: Reporting Standards**

Name of standard	Abbreviation	Further information
AccountAbility 1000 Series	AA1000S	<a href="http://www.accountability.org.uk">www.accountability.org.uk</a>
Amnesty International's Human Rights Guidelines for Companies	Amnesty	<a href="http://www.amnesty.org.uk/business/pubs/hrgc.shtml">www.amnesty.org.uk/business/pubs/hrgc.shtml</a>
Agence de Rating Social et Environmental sur les Entreprises	ASPI	<a href="http://www.aresa-sa.com/">http://www.aresa-sa.com/</a>
Dow Jones Sustainability Group Index	DJSGI	<a href="http://www.sustainability-index.com/">www.sustainability-index.com/</a>
ECCR/ICCR Benchmarks for Global Corporate Responsibility	ECCR/ICCR	<a href="http://www.web.net/~tccr/benchmarks/">www.web.net/~tccr/benchmarks/</a>
Eco-Management and Audit Scheme	EMAS	<a href="http://europa.eu.int/comm/environment/emas/">europa.eu.int/comm/environment/emas/</a>
Ethical Trading Initiative Base Code	ETI	<a href="http://www.ethicaltrade.org">www.ethicaltrade.org</a>
EU Eco-label criteria	Eco-label	<a href="http://europa.eu.int/comm/environment/ecolabel">europa.eu.int/comm/environment/ecolabel</a>
Forest Stewardship Council's Principles and Criteria for Forest Management	FSC	<a href="http://www.fscoax.org">www.fscoax.org</a>
FTSE4Good Selection Criteria	FTSE4Good	<a href="http://www.ftse4good.com">www.ftse4good.com</a>
Global Reporting Initiative Guidelines	GRI	<a href="http://www.globalreporting.org">www.globalreporting.org</a>
IFOAM Basic Standards	IFOAM	<a href="http://www.ifoam.org">www.ifoam.org</a>
International Organization for Standardization ISO9000 & 14000	ISO9000/14001	<a href="http://www.iso.ch">www.iso.ch</a>
Organisation for Economic Co-operation & Development Guidelines for Multinational Enterprises	OECD	<a href="http://www.oecd.org/daf/investment/guidelines/">www.oecd.org/daf/investment/guidelines/</a>
Social Accountability 8000	SA8000	<a href="http://www.sai.org">www.sai.org</a>
SIGMA Guidelines	SIGMA	<a href="http://www.projectsigma.com">www.projectsigma.com</a>
Global Sullivan Principles	Sullivan	<a href="http://www.revleonsullivan.com">www.revleonsullivan.com</a>
UN Global Compact	UN GC	<a href="http://www.unglobalcompact.org">www.unglobalcompact.org</a>
WHO/UNICEF International Code on Marketing of Breastmilk Substitutes	WHO / UNICEF	<a href="http://www.who.int/nut/documents/code_english.PDF">www.who.int/nut/documents/code_english.PDF</a>

*Source: Moller and Erdal, 2003*

## 2.19 Environmental and financial performance

Corporate greening can impact a company's environmental and financial performance. Businesses modify their behavior to address society's concerns towards environmental management systems and waste minimization. Corporate greening involves activities designed to offer products, services and processes, with minimal detrimental impact on the natural environment (Polonsky, 1994). The relationship between environmental and financial performance remains unclear, although evidence is beginning to emerge that there can be a positive relationship between proactive greening behavior and the firm's financial situation. Stringent environmental regulation can improve firms' competitiveness and, as a result, will

lead to a positive relationship between environmental and financial performance for the firm (Porter and van der Linde (1995).

## 2.20 Summary of the literature review

The generic lineages from literature traces a virtual path covering the corporate social responsibility approach, the business ecosystem approach, sustainability reporting approach, resource-based and economic value added perspectives. Along with this evidence from Corporate strategic orientation has underlined a major shift from an investment driven strategy to a sustainability-led-innovation driven strategy. For the investment driven strategy, efficiency becomes the dominant source of competitive advantage. In a sustainability-led-innovation driven strategy, the ability to integrate the societal, environmental and stakeholder drivers used to produce innovative products and services, becomes the dominant source of competitive advantage (World Economic Forum, 2001).

Societal, environmental and stakeholder drivers are now integrated with strategy in firms using innovative ‘hybrid-models’ by combining drivers like corporate philanthropy, social investment and clean manufacturing with core corporate competencies and assets. At the systemic level, there is the emergence of alliances and multi-stakeholder models. Along with governmental regulatory instruments like fiscal incentives; disclosure requirements; procurement requirements, the role of stakeholder groups have a growing influence on fostering responsible practices and maintaining corporate reputation (Roper and Cheney, 2005).

**Table 2.6: Linkages of Societal Environmental Governance to Performance**

Corporate Social Responsibility approach	The business ecosystem approach	Sustainability Reporting approach	Resource-based perspective and Economic Value Added
Carroll, 1979 & Freeman, 1984 CSR relevance to firms; Stakeholders linked to firm’s objectives	Donaldson, Preston 1995 St’holder relations, business ecosystem improve economic perform	Burns, 2003 TBL line links Societal and Environmental compliance strategies	Barney, 1991 Acctg performance indices difficult to capture intangible relationships
Mitchell, 1997 Stakeholder identification and salience	Testa, 2002 The Stakeholder 360 measurement of perceptual gaps	Dahl, 2004 Env’tl compliance lead to comp adv at each stage of PLC	Hart, 1995 Develop unique inimitable resources leads to value
Castells, 2000 Mapping stakeholder relationships onto business models	S’tegger & Wagner, 2003 Isolate envirtl drivers causing econ performance	Center for Innovn in Mgt, 2003 Innovation & social license to operate important factors	Stern & Stewart, 1970; Dillon & Owers, 1997 EVA and Sustainable investments

Literature (Table 2.6) linked the relevance of Corporate Social Responsibility on firms (Carroll, 1979), while Freeman (1984) incorporated stakeholders into firm’s objectives. That stakeholders lead to innovations and thereby affect strategy led to a shift of focus from the tangible to the intangibles (Clarkson, 1995). This led to a renewed search in for societal and environmental drivers as depicted in the Conceptual framework. The moot question was to develop a framework for stakeholder criticality (Mitchell, 1997) and map stakeholder

relationships onto business models (Castells, 2000). A critique that emerges is that such frameworks were skewed towards economic aspects for firms rather than societal and environmental aspects. Literature review accentuates that corporate social responsibility has undergone a transition from being 'nice to do' to 'need to do' (Segumpan and Abu Zahari, 2003).

Integrating stakeholder relationships into the business ecosystem (Donaldson & Preston, 1995), the triple bottom line performance (Burns, 2003), life cycle analysis to re-aggregate SEG (Societal, Environmental and Governance) (Dahl, 2004) and the evolution of 'Green GDP' (System for Integrated Environmental and Economic Accounting (SEEA), 1993) led to the development of the Conceptual framework linking Societal and Environmental drivers to Economic Value Added. Green GDP is the effort by firms to create value by embedding concerns for the environment into their products. These strategies differentiate a company's brand from its competitors by lowering costs, enhancing consumer and employee loyalty and increasing market share. For these companies, using environmentally preferred chemicals and materials is a core value (Greiner et. al., 2006).

Literature review in the subject area when scanned for linkages (Table 2.6) between Societal and Environmental drivers and Competitive Advantage unveils four 'lineages' or approaches. The lineages are the Corporate Social Responsibility approach, the business ecosystem approach, Sustainability reporting approach, Resource-based perspective and Economic Value Added. The Corporate Social Responsibility approach leads to map stakeholder relationships onto business models. The Business Ecosystem lineage leads to identifying drivers. The Sustainability Reporting approach links to Competitive advantage, Innovation and social license to operate. While the Resource based perspective and Economic Value Added concepts lead to inimitable resources, partnerships with advocacy groups, and sustainable investments.

The critique to the proposition that responsible business firms perform financially expresses skepticism. According to this view, CSR make business sense for firms in specific circumstances. Global firms that have to balance societal, environmental and stakeholder drivers with business imperatives have few easy choices. Pressure of balancing human rights with business interests faced by Google China illustrates this dilemma (Vogel, 2006).

The four 'lineages' of Corporate Social Responsibility approach, the business ecosystem approach, the Sustainability reporting approach, Resource-based perspective and Economic Value Added integrate into an ecosystem that is termed as 'industrial metabolism' by Ayres (1994). A firm is embedded in an ecosystem consuming energy and materials, chosen from the resource based optimization perspective, to create desired products and services that provide economic value added. The firm also produces undesired outputs (waste emissions). Sustainability reporting checks the 'footprint' left by the firm.

There is convergence of views among researchers, practitioners and corporate entities with respect to societal, environmental and stakeholder drivers and their impact on competitive advantage. These issues that come under the umbrella of Corporate Social Responsibility (CSR) or Sustainability Impact Management (SIM) is gaining relevance as a set of integrated

policies and discrete practices in corporate strategy. They reflect business' commitment to the society, accountability to the environment and relationship with stakeholders. The Societal, Environmental and Stakeholder issues goes beyond corporate philanthropy or community relations.

## CHAPTER 3 CASE STUDIES

### 3.1 Case Analysis

Case analysis of four international firms with a distinguished record on sustainability practices is performed. In the case analysis two industries are represented, each with two firms chosen from USA/ Europe and Asian regions. Two international firms have global presence (Toyota, USA and Philips, Holland) and two firms have a stronger presence in Asia (Tata Steel, India and LG Electronics, South Korea). The choice of firms from different regions allows the analysis of appropriate societal, environmental and stakeholder value drivers across different socio-political, cultural and economic climates and industries.

The case studies were based on the company sustainability reports and related material published in EthicalCorp<sup>21</sup>, CSRWire<sup>22</sup> and Covalence<sup>23</sup> online publications. Assessments were performed using publicly available information. The societal, environmental and stakeholder value drivers (44 items) were identified from a literature review, based on the MIBE study<sup>24</sup> and Arthur D. Little studies<sup>25</sup> (Table 3.1).

**Table 3.1: Generic Value Drivers**

<b>Societal value drivers</b>	15.sustainability report	30.responsible HRM
1.fair business practices	16.environmental management	31.board levels ethics
2.ethical behavior for all	17.environmental purchasing	32.quality products / services
3.values disclosure	18.environmental training	33.stakeholder relations
4.corporation & community	19.employee responsibility for environment	34.friendly work environment
5.invests in the communities	20.life cycle analysis	35.same standards globally
6.rights of consumers	21.mgt understands sustainability	36.encourages new ideas
7.information that is truthful	22.fossil fuel use reduction and uses renewable energy sources	37.encourages experimentation
8.company is open to critiques	23.toxic chemical use reduction	38.environmental training
9.fair practices with suppliers	24.reducing unsustainable items	39.allow skill enhancement
10.return on investment	25.recognition to employees environmental initiatives	40.suggestion scheme
<b>Environmental value drivers</b>	<b>Stakeholder value drivers</b>	43.fidelity with stakeholders
13.commitment to environmental policy	28.qualitative measures for environment	42.share employee information

14.environmental targets	29.equitable reward and wage	
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### 3.2 Comparison of the Societal Value drivers

Table 3.2 compares the Societal value drivers. Toyota illustrates a distinctive position displaying concern for the society through the introduction of fuel cell hybrid vehicles and ultra-low emissions. It has adopted ‘kaizen’ for continuous improvement by coaching rather than fixing. Likewise, Tata Steel displays a commitment to societal issues. 63 per cent of its capital is held by the Tata Council for Community Initiatives (TCCI). The company has the MD Online process to handle criticism. Through its Millennium Development Goals and Global Compact, the company displays ethical values.

Toyota and Tata Steel are confronting pressures regarding market demand and regulatory challenges regarding resource optimization. Both organizations are committed to sustainability practices related to supplier environmental practices and the adoption of performance standards for waste management and pollution prevention.

Philips has an ‘embedded’ model approach to drive sustainability. Through fair disclosure and equal treatment, the company sets an example in commitment to Societal values. Philips has extended its collaborative approach by working together with BMW and Toyota to eliminate mercury for the ‘Xenon Lighting automotive systems’. LG Electronics focuses on Societal value drivers for appropriate business development. The company values the opinions of customers and adopts them to create more value in its products.

The Philips and LG Electronics cases demonstrate more commitment to cooperative relationships. Each organization is different in terms of culture and goals, but responds to the societal, environmental and stakeholder imperatives as critical value drivers. Further details are provided in Table 3.2.

**Table 3.2: Comparison of Societal value drivers**

Driver	Toyota	Philips	TATA Group	LG Electronics
1. fair business practices	hybrid and ultra-low emissions, fuel cell hybrid vehicles	company-wide Sustainability Key Performance Indicators	Tata Council for Community Initiatives, Global Compact; MDGs	encourages fair competition to promote social responsibility;
2. ethical behavior for all	'kaizen' continuous improvement, coach rather fix	an embedded model approach to drive sustainability	professionalism, honesty, integrity ethical standards	employees carry out their duties based on fairness, to foster a sound culture
3. values disclosure	fuel efficiency standards; CO2 emissions; recycling	press releases, website; fair disclosure and equal treatment	disclosures from Directors and key managerial personnel	No clear evidence
4. corporation & community	environmental educational facility; forest; biomass	social investments support communities	self-reliant communities; Family Welfare	Rational Business Development;
5. invests in the communities	One-Percent Club, contributes 1% to philanthropy	200 social projects, healthcare and education	63 per cent capital held by Tata Council for Community Initiatives	assistance to drought- or flood-damaged areas, protecting wild animals
6. rights of consumers	'customer comes first', build relations with its customers.	Xenon Lighting automotive systems with BMW and Toyota; eliminated mercury;	value creating partnerships, product development cycle time	opinions of customers form the very basics of business, respect for customers and creating value.
7. truthful information	feedback from customers; traffic safety activities.	Global Consumer Service (GCS)	No specific detail	transactions based on fair competition, build cooperative relationship
8. company is open to critiques	hotlines for resolution of issues on compliance	responds to critiques, transparency, human rights	Tata Group has the MD Online to handle critiques.	No specific evidence
9. fair practices with suppliers	supplier ISO 14001 certification, green purchasing	Philips Supplier Declaration on Sustainability	promote value creating partnerships with suppliers	equal opportunities; equitable circumstances;
10. return on investment	No concrete information available	elaborates financial results by conference calls; Philips Product Divisional analysts' days; broker conferences	concerned for shareholders' stock price, address concerns EVA positive, EBIT, dividends and P/E ratio.	respects the rights of stockholders, protect interests of shareholders

### 3.3 Comparison of the Environmental Value drivers

Firms add value through major environmental initiatives. As depicted in Table 3.3, Toyota's emphasis on the environment begins at the design stage. Redesign of parts is based on a life cycle assessment of the aluminum cylinder block and air conditioner that uses CO2 replacing CFC as a coolant. Toyota is pursuing the development of fuel cells, a regeneration battery

and hydrogen refueling stations. Tata Steel integrates Corporate Social Responsibility with its brand image. The firm goes 'beyond compliance' through social audits and eco-labeling. It was the first corporation in India to adopt Global Reporting Initiative.

Both the firms rely on 'green teams' and life-cycle costing. Life cycle assessment evaluates the cost of a product from the cradle to grave. These firms realize that waste released to the environment is an inefficient use of expensive resources and a potential legal liability. Philips has adopted the EcoVision program to eco-design its green flagship products. The 32 inch TV illustrates this. It uses lead-free soldering and mercury reduction. At Philips, sustainability is a key driver at all levels. The People Performance Management (PPM) appraisal system integrates corporate values and designing for the environment. LG Electronics has initiated 'environment first' policy. Its 60 inch TV received the EDP Certification. Its 'declaration for a cleaner environment' meets ISO14001 and conforms to a green purchase system. To reduce the use of hazardous substances, it uses the ATROiD (Assessment Tool for Recycling Oriented Design) process. Both Philips and LG Electronics believe that future progress would largely rely on pollution prevention, related design changes and recycling programs. This emphasis results in positive environmental impacts and a higher Economic Value Added (details Table 3.3).

Driver	Toyota	Philips	TATA Group	LG Electronics
11. environmental commitment	development of environmental technology	Green Flagship products; Weight	CSR is integrated with the brand image, embed Compliance	Environment First, cleaner environment by selecting green products
12. commitment to sustainable development	0 landfill waste; 5 % reduction in CO2 emissions	EcoVision program	Social Audit, Life-Cycle Assessment and Eco-Labeling	aims to lead business group in environment, safety, and health
13. written environmental policy	environmental reports since 1998;	has a written environmental policy.	Environmental laws, Conserve natural resources	written policy of EESH (Energy, Environment, Safety, and Health)
14. targets for environmental performance	targets for environmental performance	eco-efficiency targets are set; eco-designed green 32 inch TV	some targets, no specific details	60 inch first certification of environmental declaration (EDP Certification);
15. sustainability report	Environment Monitoring Report	publishes sustainability report	GRI four years ago, verified by PWC every year	Cleaner Environment meets ISO14001, EESH inspections
16. environment management system	fuel efficiency; emissions; clean energy vehicles	sustainability key driver at all levels of economic pyramid	ISO 14001 EMS Certification	Actively followed
17. environmental purchasing policy	compliance for suppliers of parts and accessories	has initiated Sustainable Purchasing	Funds paid to the suppliers for reclaiming waste	green purchase system; to check use of hazardous substances
18. environmental training and education	environmental education to employees	no direct evidence	extensive training for EMS & OHSMS	EESH training, IBL (Internet Based Learning) course, EESH; ISO14001
19. employee responsibility for environment	zero accident record; lower noise and dust	People Performance Management (PPM) appraisal	No specific evidence	transparent management is one of LG Electronics' corporate ethical criteria
20. life cycle analysis (assessment)	LCA redesign of aluminum cylinder block	The Company has a well defined Life Cycle analysis policy	Life Cycle Assessment Study; examines from the cradle to grave	conducted LCAs for products, ATROiD (Assessment Tool for Recycling Oriented Design)
21. management understands sustainability	policy for clean products	embedding Design for the Environment	effective CO <sub>2</sub> emission, slag granulation	alternatives to heavy metals, Expended Producer
22. fossil fuel reduction, uses renewable energy	fuel cell; secondary battery	Not much evidence of Fossil fuel use reduction efforts	No specific initiative	minimize the wasteful spending of energy, recycle the wastewater
23. toxic chemical use reduction	air conditioner that uses CO2 (not CFC)	lead-free soldering and mercury reduction	water recirculation; recycling of ash quenching water	End lead use, replaced the chlorine/alcohol cleaners with water-based cleaners
24. reducing unsustainable products	DPNR (Diesel Particulate NOx Reduction)	ISO 14001 take-back/recycling	CFC consumption reducing, Collieries achieved zero discharge	lead-free solder products; 'green' refrigerator, foaming agents ozone depletion zero
25. recognition to employees environmental initiatives	no specific mention on this issue available	top in the DJSI index ranking, AEX list of businesses	employee recognition and motivation schemes	No clear evidence
26. quantitative environmental measures	No direct evidence is available on this aspect	GRI, ISO 14001 and ISAE 3000	Green House Gas emissions; Energy Intensity; Steel Recycling	No specific information
27. qualitative measures for environment	Proactive Prevention, Best Practices, case studies	member of WBCSD	value balancing; reduction of raw material/energy consumption	No specific information

### **3.4 Comparison of the Stakeholder Value drivers**

The Stakeholder value drivers are concerned with the groups that are affected by or can influence the firms' actions. Toyota encourages multi-skilling and quality circle initiatives for employee support. Tata Steel focuses on the Corporate Citizenship Index. Tata Steel deploys value drivers like the Tata Ethical Code, three tier Joint Consultation System for sustainability to achieve positive Economic Value Added. Philips challenges its employees to adopt sustainability through employee engagement and empowerment. Significant innovations like biometric template protection and radio frequency identification provide superior value for customers. LG Electronics emphasizes stakeholder value drivers by adhering to the code of ethics and through eco-product development training. LG believes that aligning the employees with the commitment of sustainability generates motivation for innovation. Table 3.4 compares the specific stakeholder value drivers.

**Table 3.4: Comparison of Stakeholder value drivers**

Item	Toyota	Philips	TATA Group	LG Electronics
28. employee development	on-the-job training; awareness programs	focus to empower employees to develop skills for next position.	encourages participation of workforce in the management	flexible communications, employees with an equal opportunity
29. equitable wages	good reward and wage system in place	concentrating on employee engagement	link pay with performance, Key Result Areas,	understanding behaviorally as individuals and team
30. responsible HRM	continuous improvement, multi-skilling	challenged employees with sustainability as a key driver	exemplary HRM, corporate citizenship index	the LG Health Index; health program, assess value addition
31. board levels ethics	The Toyoda Precepts, ahead of times	the Philips Sustainability Board	the Tata Ethical Code, ethical oversight at board levels; aim to be EVA positive Company	creating value for customers autonomous management, adheres to code of ethics as a standard
32. quality products / services	quality at the design stage; parts fitted with precision, quality audits	customer feedback during stages of the lifecycle; product creation includes customer interactions	international standards of quality and customer service; high ethical standards and values; export thrust	respond to customer complaints; offer best products and services, safe and clean environment
33. stakeholder relations	life cycle has impact on society; dialogue with public authorities and customers.	continuing stakeholder dialogue; listening to internal and external stakeholders.	Vision statement delineate identification of stakeholders; balancing needs; investor survey, balance score card.	volunteer activities, enlightening employees about the environment and safety, providing clear information to satisfy the needs of customers
34. friendly work environment	create a workplace where employees can work with their trust in the company; stable employment	Though circumstantial evidence point towards a family-friendly work environment, there is no specific evidence in this regard	Competency coverage ratio, knowledge management index, involvement in Annual Quality Improvement Plans	value system continuous self-development and fairness in performance; employees take pride in their company and always maintain an honest and fair attitude
35. same standards at home and abroad	consolidated EMS for overseas distributors	Eco Vision, ISO 14001, Supplier requirements are worldwide	commitment to global standards reflected in its Vision	helped overseas plants strengthen accident prevention activities
36. encourages new ideas	Sustainable Mobility Project; 2030 vision	biometric template protection; radio frequency identification (RFID)	recycling spillage by vacuum, dry fog dust suppression	vacuum cleaner employs dust-collecting mechanism, centrifugally separates dust and air
37. encourages experimentation	emissions impact on eco-system, transport related noise	challenged employees on new business, with sustainability as a key driver	encourage experimentation, change of mindsets	Inadequate evidence in this regard.
38. conducts environmental training	environmental training, training on ISO 14001	no specific detail available on this aspect	Training on ISO14001 & OHSAS-18001, EHS sustainability	Eco Product Development as a compulsory training course
39. allow skill enhancement	specific evidence lacking	no specific detail available on this aspect	retraining and skill augmentation	strives to foster creativity among its employees
40. suggestion scheme	Creative Suggestion, QC circle activities	Key Performance Indicators of Communication	suggestion scheme in place	an effective suggestion scheme in place
41. dialogue with stakeholders	development of the local community; green marketing	electronic communication; a 'Connected Planet' approach	prioritized stakeholder consultation and the frequent stakeholder engagement	co-prosperity; co-prosperity and cooperation with every stakeholder

42. shares company information	sense of critical urgency through communication	stakeholders assurance, credibility	Publishes Corporate Sustainability Report	provides customers with product-related safety precautions
43. flexible communications	The Code of Conduct; hotline for compliance.	Responsible Transformation for employees; Employee Engagement Index	three tier Joint Consultation System, MD-online interact with employees.	environment to express suggestions, flexible communications with employees
44. rewards employee contributions	No concrete information available	financial results by conference calls; broker conferences	strategy/sustainability issues that address EVA, EBIT	respects rights of stockholders, protect interests of majority shareholders

### 3.5 Comparative analysis

This analysis has three fundamental dimensions: significance, direction, and magnitude. A five point scale was used for comparison, with +2 as ‘extensive evidence’, +1 for ‘somewhat evident’, 0 for ‘neutral’, -1 for ‘little evidence’ and -2 for ‘no evidence’. ‘Extensive evidence’ meant that the practice was presently followed and specifically mentioned in the Sustainability report. ‘Neutral’ signifies that the facts do not provide clear evidence of the presence of the policy practice and ‘no evidence’ meant that such practice did not appear.

The correlation between the firms with the level of societal, environmental and stakeholder driver ranks are indicated by Spearman's rho analysis. This is a non-parametric rank order correlation coefficient which empirically indicates the direction, strength and significance of bivariate relationships (Chatterjee, 2000). This is suitable for this analysis because different firms have different rankings regarding the societal, environmental and stakeholder drivers. The overall comparative rankings (societal, environmental and stakeholder value drivers combined) of the case studies of Toyota, Philips, Tata Steel and LG Electronics are indicated in Table 3.5.

**Table 3.5: Overall evaluation of the Case studies**

	Toyota	Philips	TATA Steel	LG Electronics
Total score (highest = 88)	40	48	53	23
Mean score per item	0.91	1.09	1.20	0.52
Standard deviation	1.22	1.33	1.13	1.49

The highest total score is 53 for TATA Steel out of a possible maximum of 88. This is quite average, indicating the firms’ deployment of the value drivers is in the middle range. Tata Steel (1.20), Philips (1.09) and Toyota (0.91) are the top three firms (Table 3.5) in terms of mean score per item. This indicates that the societal, environmental and stakeholder value drivers are ‘somewhat evident’. LG Electronics (1.49) and Philips (1.33) have the higher standard deviations from the mean, suggesting that there is higher dispersion of the value drivers away from the mean value.

**Table 3.6: Correlation analyses: Combined value drivers**

	Toyota	Philips	Tata Steel
Philips	0.373*	-	
Tata	0.338*	0.340*	-
LG	0.236	0.146	0.149

\* Correlation is significant at the 0.05 level (2-tailed)

Table 3.6 presents the non-parametric correlation of the overall case analysis indicating a number of significant relationships. Rank order compares the rating of companies on drivers. The higher the correlation the more the company responds to the drivers. The better the companies, the higher are the drivers' scores. Toyota shows significant correlation with Philips and Tata. Also, Philips is significantly correlated to Tata. The societal, environmental and stakeholder value drivers are consistently demonstrated in these firms. The Global and Asian emphasis on the value drivers are not very different. Significant correlations between Philips, in the Electronics industry and Tata Steel, in the manufacturing industry, and between LG Electronics, representing Electronics industry indicate that a similar set of value drivers are considered irrespective of the industry.

Considering the Societal value drivers (Table 3.7), Tata Steel (1.50) maintains its position at the top, while Toyota (1.00) supersedes Philips (0.90). The highest score is 12 out of a possible maximum of 20, implying modest response to the societal drivers. Comparing the mean scores indicates Tata Steel responds most to the societal value drivers, while Toyota emphasizes these drivers more than Philips. It is also possible to pick up few 'key societal drivers' based on the high total scores across the driver items (Table 3.7). The key drivers are fair business practices, ethical behavior for all, invests in the communities, rights of consumers and fair practices with suppliers. The key drivers represent certain initiatives that are consistently and significantly responsive to societal drivers across the firms.

**Table 3.7: Summary of the Societal value drivers in Case studies**

Societal value drivers	Toyota	Philips	TATA Steel	LG Electronics	Key drivers (higher scores)
1. fair business practices	+2	+2	+2	+2	+8
2. ethical behavior for all	+1	+2	+2	+1	+6
3. values disclosure	+2	+2	+1	-2	
4. corporation & community	+1	+2	+2	-2	
5. invests in the communities	+2	+1	+2	+1	+6
6. rights of consumers	+2	+1	+2	+1	+6
7. information that is truthful	0	+1	-1	+1	
8. company is open to critiques	+1	-2	+2	-2	
9. fair practices with suppliers	+1	+2	+1	+1	+5
10. return on investment	-2	-2	-1	-2	
Total score (Societal) (Possible highest = 20)	10.0	9.0	12.0	-1.0	
Mean score (Societal)	1.00	0.90	1.50	-0.10	
Standard deviation	0.74	1.36	1.07	1.69	

Table 3.8 indicates the non-parametric correlations for the Societal value drivers. None are statistically significant at the level 0.05. The emphasis of societal value drivers is very similar across the companies.

**Table 3.8: Correlation analyses: Societal value drivers**

	Toyota	Philips	Tata Steel
Philips	0.186	-	
Tata	0.299	- 0.009	-
LG	0.243	0.093	0.145

\* Correlation is significant at the 0.05 level (2-tailed)

Considering the Environmental value drivers (Table 3.9), the rankings change considerably with Philips (1.24), Toyota (1.18) and LG Electronics (0.88). Results indicate that these firms are more influenced by the Environmental drivers to develop initiatives. There is also a wide variance of scores indicating varying levels of adoption among the array of environmental drivers.

**Table 3.9: Summary of the Environmental value drivers**

<i>Environmental value drivers</i>	Toyota	Philips	TATA Steel	LG Electronics	Key drivers ( <i>higher scores</i> )
11. environmental commitment	+2	+2	+2	+2	+8
12. sustainability commitment	+2	+2	+2	+2	+8
13. written envt'l policy	+2	+2	+2	+2	+8
14. environmental targets	+1	+2	+2	+1	+6
15. sustainability report	+2	+2	+2	+2	+8
16. envt'l management	+2	+2	-1	+2	+5
17. environmental purchasing	0	-2	+1	-1	
18. environmental training	+1	-1	+1	+2	
19. empl'ee envt'l responsibility	+1	+1	-1	-1	
20. life cycle analysis	+1	+2	+2	+2	+7
21. mgt understands s'tainability	+2	+2	+2	+2	+8
22. fossil fuel reduction and uses renewable energy sources	+1	-1	-2	+1	
23. reduction of toxic chemical	-2	+2	-2	+1	
24. reduce unsustainable items	+1	+2	+1	+1	+5
25. recog'tion of empl envt'in've	0	+1	+1	-1	
26. quantitative envtl measures	+2	+2	+1	-1	
27. qualitative envtl measures	+2	+1	+1	-1	
Total score (Environmental) (Possible highest = 34)	20.0	21.0	14.0	15.0	
Mean score (Environmental)	1.18	1.24	0.82	0.88	
Standard deviation	1.07	1.30	1.43	1.32	

Nine key environmental drivers emerge based on common responses. Firms emphasize environmental and sustainability commitment. There is focus on environmental targets based on written environmental policy, sustainability reporting and environmental management.

The correlations for the Environmental value drivers (Table 3.10) indicate that there is significant correlation between Toyota and Philips (0.469), Tata Steel (0.476) and LG Electronics (0.461). Similar significant correlation exists between Philips and Tata Steel (0.494) and LG Electronics (0.508) and Tata Steel and LG Electronics (0.533). The statistical significance indicates the importance the firms attach to the environmental

drivers. The results support the existence of a common set of critical environmental drivers in the firms.

**Table 3.10: Correlation analyses: Environmental value drivers**

	Toyota	Philips	Tata Steel
Philips	0.469*	-	-
Tata	0.476*	0.494*	-
LG	0.461*	0.508*	0.533*

\* Correlation is significant at the 0.05 level (2-tailed)

Table 3.11 represents the summary of the Stakeholder value drivers. Interestingly, Tata Steel (1.59), Philips (1.06) and Toyota (0.59) are at the top, following a reshuffle of the earlier rankings.

**Table 3.11: Summary of the Stakeholder value drivers**

Stakeholder value drivers	Toyota	Philips	TATA Steel	LG Electronics	Key drivers (higher scores)
28. employee development	+1	-1	+1	-1	
29. equitable reward and wage	-1	+1	+2	+1	
30. responsible HRM	+2	+1	+2	+1	+6
31. board levels ethics	+1	+2	+2	+2	+7
32. quality products / services	+2	+2	+2	+1	+7
33. stakeholder relations	+2	+2	+1	+2	+7
34. friendly work environment	+1	-1	+2	+2	
35. same standards globally	-2	+2	+1	-2	
36. encourages new ideas	+1	+2	+2	+2	+7
37. encourage experimentation	+1	+2	+1	-1	
38. environmental training	+1	-1	+1	+2	
39. allow skill enhancement	-2	-1	+2	+1	
40. suggestion scheme	+1	+1	+1	-2	
41. dialogue with stakeholders	0	+2	+2	+1	+5
42. shares company info	+1	+2	+2	+1	
43. flexible communications	+2	+1	+1	-2	
44. employee contribution rewards	-1	+2	+2	+1	
Total (Possible highest = 34)	10	18	27	9	
Mean score (Stakeholder)	0.59	1.06	1.59	0.53	
Standard deviation	1.39	1.35	1.16	1.18	

Tata Steel has the highest score of 27 out of a possible 34. The company has been consistently committed to the theme of Stakeholder responsibility. The key drivers that are common to the firms are responsible HRM, board level ethics, quality products / services, stakeholder relations and dialogue with stakeholders.

The correlation table for Stakeholder value drivers (Table 3.12) shows no significant relationships. For most of the firms, though there is no statistical significance there is negative correlation between Philips and LG Electronics (-0.098) and between Tata Steel and LG Electronics (-0.082). The negative correlation implies that when stakeholder value drivers scores for Philips and Tata Steel increases, the corresponding scores for the others firms (specified earlier) decreases.

**Table 3.12: Correlation analyses: Stakeholder value drivers**

	Toyota	Philips	Tata Steel
Philips	0.171	-	-
Tata	0.168	0.346	-
LG	0.155	- 0.098	- 0.082

\* Correlation is significant at the 0.05 level (2-tailed)

### 3.7 Critical Societal, Environmental and Stakeholder value drivers

The empirical findings of the case analysis indicate that there is an association between companies' societal, environmental and stakeholder strategies and the drivers to which they respond. There are a number of key drivers that are common to the companies. The findings also denote that the best practice firms are developing strategies like targeted fuel efficiency levels, specific reduction in emissions and clean energy vehicles (for Toyota), the Eco Vision embedded model for sustainability (for Philips), based on these value drivers. The 'triple bottom line' approach of firms to sustainability and value creation reflects that companies are influenced by drivers to undertake societal, environmental and stakeholder initiatives.

For the Societal issues, ethical business practices and high standards of employee ethical behavior are critical in all firm sustainability reports. Developmental projects for communities, fair practices for suppliers and the rights of consumers have strong support as drivers.

The specific commitment to the environment included measures of environmental impact, training on Environment and on environmental management system. Similarly, the Written environmental policy incorporates targets for environmental performance and the availability of a sustainability report. Sustainability through optimal use of resources reduces negative environmental impacts. The reduction of fossil fuel use and uses of renewable energy sources were found to be important key drivers for energy conservation and resource optimization. The use of life cycle analysis and toxic chemical reduction policy evidence is clearly important. Finally eliminating unsustainable products demonstrates positive commitment to the environment.

For Stakeholder drivers, the key actions include responding to societal and environmental issues. There are specific and repeated instances of stakeholder responsiveness in the case studies, like board level ethics is a critical driver for mutual partnership between the corporation and the community regarding societal and environmental issues. Sharing information and openness are drivers relating to dialogue with stakeholders.

The analysis of the case studies and the ranking process identifies the key Societal, Environmental and Stakeholder value drivers in international firms. There is an overall positive trend among the companies responding to the societal, environmental and stakeholder drivers by strategic initiatives. However, the average rank scores for the driver sets, provides scope for enhancement of the initiatives. Though the companies differ in terms of industry, location and products, common set of drivers relating to societal, environmental and stakeholder issues do influence the strategic initiatives they implement. A limitation of this case study is that the results should be interpreted with caution given that the small number of cases. Also the ones selected are representative of the companies who support CSR.

Firms are realizing that they need to gauge the impact of the societal, environmental and stakeholder drivers by assessing Economic Value Added because their impact fundamentally affects their competitive position. The innovations highlighted through the case studies are indicative of the societal, environmental or stakeholder trends and the responsiveness of good companies to these drivers. They are important ‘mirrors’ of the long term expectations of sustainable development. Organizations who respond more effectively to the societal, environmental and stakeholder value drivers will achieve greater social responsibility and higher value added.

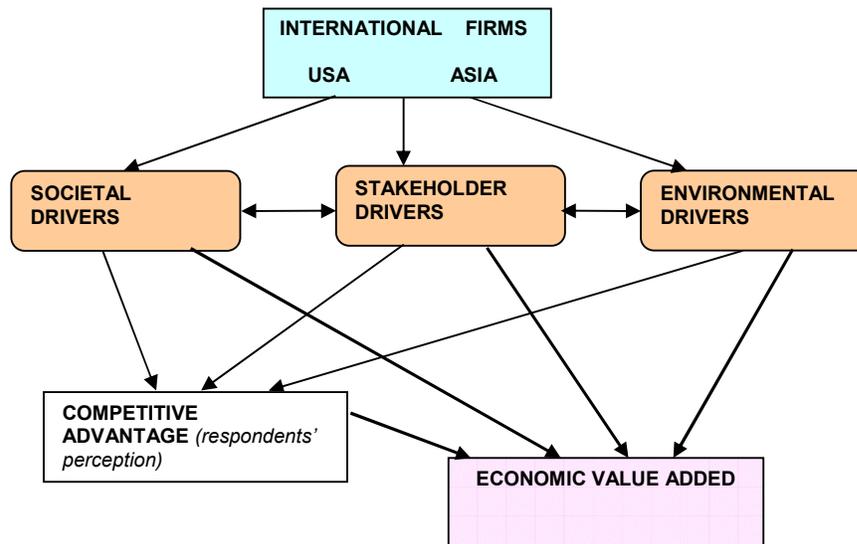
## CHAPTER 4 CONCEPTUAL FRAMEWORK

### 4.1 The basis of the Conceptual framework of the study

The literature review identified the shifting paradigms, leading to the concept of business ecosystem. The resource-based perspective propounds that the societal and environmental demands facing a firm could motivate the firm to develop unique resources which are valuable and inimitable. The sustainability reporting measures the firm's compliance performance. Thus a firm aspiring to develop unique resources that are valuable and inimitable, attempts to derive its competitive advantage by aligning the firm's strategies with the drivers of societal and environmental compliance. These facets determine the objectives of this research pursuit. The momentum of the CSR movement and its relevance to sustainability presents an opportunity to address the 'gap' in this field of research, which this study aims to address. Once the societal and environmental drivers are mapped onto corporate strategy, the next challenge is measuring performance. Measurement is complicated as indices differ (Corporate Sustainability and Environmental Reports) and corporations have a complex organizational structure, with different business streams, functions and projects.

### 4.2 The Conceptual Framework

**Figure 4.1: Conceptual framework of the study**



The Conceptual framework builds on the contextual factors identified in the literature that societal, environmental and stakeholder drivers influence the Economic Value Added for International firms. The impacts are also identified from the respondents' perception of the Competitive advantage generated by the drivers. The framework underlines the potential implications that could be derived. It definitely justifies this research to build and expand knowledge horizons of Societal, Environmental and Stakeholder drivers of Competitive advantage for International firms.

The Conceptual framework depicts the dynamic interdependence among the sets of drivers which could provide strategic sources of value creation. The redefined rules of competitive advantage are that corporate strategies need to be built on change, and not on stability, firms need to organize around networks and not rigid hierarchies and it is imperative for firms to consolidate interdependencies with partners and not only seek self-sufficiency (The Conference Board of Canada, 2002).

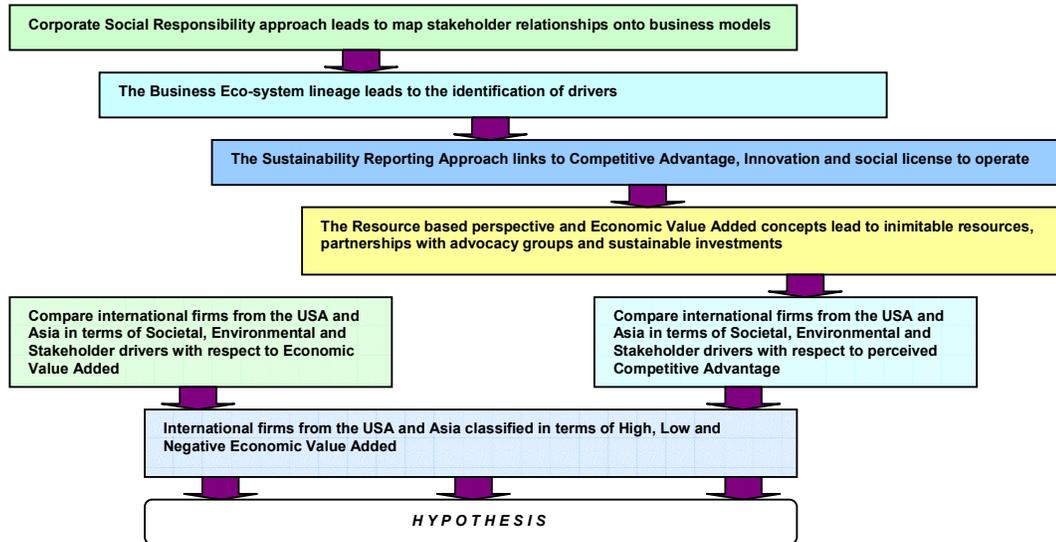
Firms in a highly competitive environment should generate the ability to successfully engage with critical stakeholders (Figure 4.1). This propels the firm to innovate efficiently leading to a network of value creation that influences economic value added. Based on this premise, it is plausible that certain Societal, Environmental and Stakeholders drivers could create value. As depicted in Figure 4.1, international firms from USA and Asia have sets of Societal, Environmental and Stakeholder drivers that are assessed from two different view points, the external assessment by the Economic Value Added and the internal assessment, i.e., by respondents' perception as to how the drivers affect Competitive Advantage of firms. The Conceptual framework also depicts how the assessment of Economic Value Added is linked with the respondents' perception of Competitive advantage.

### **4.3 Conceptual framework leading to the Research Hypotheses**

As depicted in Figure 4.2, the Corporate Social Responsibility approach (Carroll, 1979; Freeman, 1984; Mitchell, 1997; Castells, 2000, et. al.) leads to map stakeholder relationships onto business models. The Business Ecosystem approach (Donaldson & Preston 1995; Testa, 2002; Schaltegger & Wagner, 2003, et.al.) lead to identifying the societal and environmental drivers. The Sustainability Reporting approach states that innovation and social license to operate leads to Competitive advantage (Burns, 2003; Dahl, 2004, et. al.). Finally, the Resource based perspective and the Economic Value Added concepts leads to inimitable resources, partnerships with advocacy groups and sustainable investments (Barney, 1991; Hart, 1995; Dillon & Owers, 1997, et. al.). It was also evident that Economic Value Added represents a good indicator of Competitive advantage for firms. Hypotheses linking drivers with Economic Value Added (Hypotheses 1a, 1b, 1c) and drivers with perceived Competitive Advantage (Hypotheses 2a, 2b, 2c) evolve from these.

Figure 4.2 then introduces the comparative treatment in this research of US and Asian firms. From this evolves the Hypotheses 3a, 3b, 3c for the Economic Value Added factor and Hypotheses 4a, 4b, 4c for the perceived Competitive Advantage factor. Finally, the sub-classifications of the international firms from both US and Asia into high positive, low positive and negative EVA gives the remaining sets of Hypotheses 5a, 5b and 5c (for the Societal drivers), Hypotheses 6a, 6b and 6c (for the Environmental drivers) and Hypotheses 7a, 7b and 7c (for the Stakeholder drivers). The details are enumerated in section 4.4.

**Figure 4.2: Research Hypotheses evolving from ‘the lineages’ in the literature**



#### 4.4 Research Hypotheses

The Research hypothesis evolve from the core considerations regarding the impact of the societal, environmental and stakeholder drivers on the strategic corporate activities, the workplace practices, how the relationships are managed and impacts along their value chains and the supply chains. There is growing relevance of strategic philanthropy, engagement in stakeholder dialogue and socially responsible investments. The key factors that influenced the growth of Corporate Social Responsibility over the past decade have been the proliferation of the private sector globally. As compared to 37,000 multinational corporations in 1990s, there are over 70,000 international firms in early 2003. Their affiliates have gone up from 170,000 in the 1990s to over 800,000 now (Nelson, 2004). Consequent to this growth emerged new opportunities, new rights, new risks and expectations. There has also been a crisis of trust that is caused by governance scandals.

The relevance of Corporate Social Responsibility and Sustainability policies to business success is brought to limelight because of these factors. Proper management of these issues could contribute to build competitive advantage by higher Economic Value Added. Several international businesses demonstrated the value of societal and environmental drivers to be competitive. Sony Europe provides an example of Economic Value Added. Sony determines the Resource Productivity of its different product types (Lehni, 1998). Resource productivity is defined by economic value added over product life time including material consumed minus recycled and energy for production, use and recycling.

Corporate competitive advantage is the ability to create Economic Value Added from distinctive Societal and environmental drivers. Key internal and external relationships, capacity to innovate, reputation and strategic assets are accepted as sources of competitive advantage (Pearce, 2003). The capacity to innovate can be enhanced by corporate social responsibility initiatives, as seen at Vodafone, who has developed both niche products including speaking phone for the blind and blood testing phone for diabetics. Strategic assets derived from stakeholder and environmental management provides inimitable sources of competitive advantage. Providing affordable drugs to developing countries by GlaxoSmithKline Biologicals by adopting a new business model, or managing noise and

local air quality impacts with local communities around Heathrow airport by British Airways, demonstrate this. Economic Value Added represents an appropriate indicator of Competitive advantage for firms. This leads to the Hypotheses 1a, 1b and 1c:

*Hypothesis 1a: Societal drivers are significantly related to the Economic Value Added of firms.*

*Hypothesis 1b: Environmental drivers are significantly related to the Economic Value Added of firms.*

*Hypothesis 1c: Stakeholder drivers are significantly related to the Economic Value Added of firms.*

There is evidence of growth in terms of number and influence of activists, pressure groups and non-governmental organizations affecting venture capitalists and foreign institutional investors. Certain global issues such as climate change and growing obesity are being recognized by investors while assessing financial and strategic risks of certain industries. Governance gaps and weak governance lead to high levels of corruption. Such issues are controlled to a high degree of effectiveness through stakeholder relations. These intangible, socially complex resources enhance firms' ability to create long-term value while outperforming competitors in terms of competitive advantage (Barney, 1991). This conforms to the engagement of stakeholder engagement with employees, customers, suppliers and local communities to generate reputational value and trust. The value created by the interactions between the firm and its stakeholders are relational than transactional (Ring and Ven de Ven, 1994). As transactional relationships may be easily duplicated and contribute little to generate competitive advantage. But relationships are built on the time dimension and utilize investments. The relationships foster reputation and create value, leading to competitive advantage. This leads to the Hypotheses 2a, 2b and 2c:

*Hypothesis 2a: Societal drivers are significantly related to the Competitive advantage as perceived by the respondents.*

*Hypothesis 2b: Environmental drivers are significantly related to the Competitive advantage as perceived by the respondents.*

*Hypothesis 2c: Stakeholder drivers are significantly related to the Competitive advantage as perceived by the respondents.*

The spread of globalization has brought Corporate social responsibility initiatives into focus among international companies around the world. Though the societal, stakeholder and environmental drivers are applicable globally, however depending on the norms and values of respective countries, the applications of CSR could differ between regions like Asia and USA. Ruud (2002) suggests that CSR in various Asian countries vary based on their stages of development and globalization. International companies based in Asia adapt a CSR profile that reflects the values of the Asian country of operation rather than the country of origin. research also showed (Chambers *et al.* 2003) that CSR in Asia lagged to developed countries. However there is a new wave of interest among some countries like Japan with regard to CSR. A comparison of International firms from Asia and United States, leads to Hypothesis 3a, 3b and 3c:

*Hypothesis 3a: For the US firms the Societal drivers are significantly more positively related to Economic Value Added than the international firms from Asia.*

*Hypothesis 3b: For the US firms the Environmental drivers are significantly more positively related to Economic Value Added than the international firms from Asia.*

*Hypothesis 3c: For the US firms the Stakeholder drivers are significantly more positively related to Economic Value Added than the international firms from Asia.*

In order to achieve corporate social responsibility targets, firms need to surmount many obstacles like standards, appeals system and institutional frameworks that could be different in developing regions like Asia as compared to the US. Generally it is argued that CSR is a function of economic wealth and mostly the western firms score over Asian firms in terms of economic wealth (Chambers et.al, 2003). The civil society in western countries stimulates CSR by generating greater societal demands and expectations of business responsibility through the more vocal activist groups. However, Asian countries have deep rooted value-based societal organizations. Thus, societal and stakeholder indicators are more difficult to conceptualize than for economic development. From the viewpoint of the respondents' perception of competitive advantage with respect to the drivers, one needs to compare them between US and Asian firms. This leads to Hypotheses 4a, 4b and 4c:

*Hypothesis 4a: For the US firms the Societal drivers are significantly more positively related to the perceived Competitive Advantage than the international firms from Asia.*

*Hypothesis 4b: For the US firms the Environmental drivers are significantly more positively related to the perceived Competitive Advantage than the international firms from Asia.*

*Hypothesis 4c: For the US firms the Stakeholder drivers are significantly more positively related to the perceived Competitive Advantage than the international firms from Asia.*

As Asian firms grow through globalization, it is expected that the national orientations give away in favor of international practices. Firms would be exposed to foreign direct investment, global labor market and cosmopolitan consumer tastes. These would also affect CSR. Indices like the Environmental Performance Index (EPI) and objectives like social and institutional capacity for environmental sustainability become the main drivers of performance (Welford, 2005). Globalization could bring in western CSR policies into Asia and adapt them to the local circumstances. This could pose a challenge on to the resilience of the Asian firms to cling on to traditional CSR practices. Proponents of International business state that the very nature of internationalization leads to an increase in CSR. This may be due to the compulsion acting on the incoming multinational firms to establish better reputation or they may be due to incentive based business models in the emerging economies that provide incentives for governance and CSR (Ruggie, 2002). Under this globalization, firms partner with suppliers and customers link up with key stakeholders to devise environmental drivers. Cooperation with stakeholders influencing the firm justifies investments for community projects leading to relational transactions that foster value creation (Hart, 1995).

## 4.5 Roadmap for Analysis

The conceptual framework for this research study is specified in terms of analysis traces the proposed roadmap. Following the introduction, research objectives, scope of research and limitations (chapter 1), dissertation deals with the Societal, Environmental and Stakeholder drivers that evolved from the literature survey (chapter 2). The drivers were adapted for international firms with best practices from the US and Asia from case studies (chapter 3), sustainability reports and open ended discussions with experts (chapter 8). The justification of the drivers (chapter 5) and the methodology (chapter 6) including the questionnaire design is the empirical approach to the research problem. The qualitative issues emanating from interviews and discussions are dealt at the end of the discussions chapter (chapter 11). The analysis and results are sequentially presented in separate chapters to facilitate a step by step analysis and to present clarity of the analysis sequence. This includes the samples (chapter 7), the impact of drivers on EVA and Competitive Advantage (chapter 8), ANOVA analysis (chapter 9) and the sensitivity analysis (chapter 10). The dissertation concludes with the discussion, implications and future research (chapter 11).

## **CHAPTER 5**

### **MEASUREMENT: DRIVERS AND PERFORMANCE**

#### **5.1 The Independent and Dependent variables**

The formulation of research questions identifies independent and dependent variables that assigns meaning to a construct by specifying the activities or operations necessary to measure it. This research identifies the societal, environmental and stakeholder drivers of Competitive advantage of international firms. To appropriately identify the societal, environmental and stakeholder drivers sources from the literature survey are used, including the environmental indicators from Managing the Industrial and Business Environment (the MIBE project, 1990-1994) at the International Institute for Management Development (IMD). The Societal and Stakeholder drivers were adapted from the Business for Social Responsibility (BSR) and Arthur D. Little (ADL) studies. The dependent variable is the Economic Value Added (Stern & Stewart EVA Reports) of firms. The sources were chosen based on their robustness, comprehensive representation of the objectives of the present research and adaptability to the research instrument.

#### **5.2 Societal, Environmental and Stakeholder drivers**

The Environmental drivers were identified from sources based on the literature review and adapted to the current research through the case analysis (chapter 3). The Written Environmental Policy and the Publication of an environmental (sustainability) report are fundamental for a company to achieve sustainability. Specific targets for improving environmental performance, an Environmental management system and purchasing policy defines benchmarks. Employee responsibility for environmental performance is enhanced by Environmental training and education and a Life cycle analysis (assessment) policy. The initiative is spearheaded by the Management who understands sustainable development, who implements Fossil fuel use reduction policy and Toxic chemical use reduction policy. Following the same environmental standards at home and overseas is crucial for a consistent approach to sustainability. These aspects were adapted to frame questions to represent the drivers (chapter 6).

The identification of Societal and Stakeholder Drivers were also drawn from sources following the literature review to suit the research objectives. The approach incorporated seven broad areas, viz. Ethical business behavior, Stakeholder engagement, Community commitment, Consumer relations, Employee involvement towards Societal and Environmental Compliance issues, Investor confidence and Supplier alignment issues (Table 5.1).

**Table 5.1: Societal and Stakeholder issues**

<b>Societal and Stakeholder issues:</b>
1. Ethical business behavior
a. Engages in fair and honest business practices in its relationships with internal and external stakeholders
b. Sets high standards of ethical behavior for all employees.
c. Exercises ethical oversight at the executive and board levels.
2. Stakeholder commitment related:
a. The company is well-managed for societal and environmental compliance for all stakeholders.
b. Initiates and engages in genuine dialogue regarding societal and environmental compliance issues with stakeholders.
c. Values and implements disclosure.
3. Community commitment
a. Fosters a reciprocal relationship regarding societal and environmental issues between the corporation and community.
b. Invests in the communities in which it operates.
4. Consumer commitment
a. Respects the rights of consumers.
b. Offers quality products and services.
c. Provides information that is truthful and useful.
5. Employee commitment towards Societal and Environmental Compliance issues:
a. Provides a family-friendly work environment.
b. Engages in responsible human-resource management.
c. Provides an equitable reward and wage system for employees.
d. Engages in open and flexible communications with employees.
e. Invests in employee development.
6. Investor commitment
a. Strives for a competitive return on investment.
7. Supplier commitment
a. Engages in fair trading practices with suppliers

### **5.3 Justification of the Environmental drivers**

The Environmental drivers are measured for firms as they contribute to innovation that encourages new ideas, experimentation and learning. For instance, innovation has a significant impact on the process of life cycle analysis. The drivers influence building competence through environmental training and education, workshops on fossil fuel and toxic chemical use reduction initiatives. The Written Environmental Policy and the Sustainability reports require employees of firms to communicate suggestions and critiques. The drivers also help to achieve management goals and responsibilities directed at Environmental sustainability. This leads to standardization of policies within the firm and across units that may be located across continents.

#### **5.3.1 Commitment to environment**

Environmental commitment is represented by a set of practices and codes of conduct. These practices reduce emissions and waste, leads to dialogue with the community. The measures can augment recycling and preservation of natural resources and enhance the quality of life.

#### **5.3.2 Commitment to sustainability**

Commitment to sustainability is measured by firms' responsibility towards the environment and society through steps that balance between economic, environmental and

societal issues. These may be reflected by the efficient use of resources and responsible human resources policy.

### **5.3.3 Written environmental policy**

A written environmental policy, popularly known as the environmental management system (EMS) includes audits, assessments, and reports. It indicates to internal and external stakeholders that the company intends to take environmental protection seriously. The written environmental policy often acts as a guide for employee actions when it provides environmental targets and objectives.

### **5.3.4 Specific targets for improving environmental performance**

Companies may have environmental targets for improving environmental performance. It may also have a system to measure environmental impacts across the life cycle of the company's products and services. After quantifying the impacts, firms create an environmental index. The comprehensive, life cycle approach to setting targets across all activities and for all products and services, the company can objectively measure its transition towards sustainability. Exhibit 5.2 provides an example of target oriented environmental performance.

#### **Exhibit 5.1: Example of an Environment oriented Strategy**

##### ***The Natural Step- Sanga Saby***

The Sanga-Saby was the first company in the Nordic countries that adopted the Swan label for their environmental reports. The environment oriented strategy was developed by The Natural Step. In the sustainable society, nature is not subject to systematically increasing:  
Concentrations of substances extracted from the earth's crust, concentrations of substances produced by society, degradation by physical means and human needs are met worldwide. These four system conditions have been guiding for all environmental activities and reporting at Sanga-Saby.

*Source: [www.sanga-saby.se](http://www.sanga-saby.se)*

### **5.3.5 Publication of an environmental report**

The Sustainability and United Nations Environmental Program of 1997, prompted an increase in firms that publish their environmental performance for stakeholder review. Environmental reports are written for both internal and external audiences and as a tool for increasing employee involvement in environmental management, increasing employee morale, and winning top management support. A new trend for proactive companies is to move toward "sustainability" reporting, incorporating aspects of social, economic and environmental performance in a single report. For example, the Body Shop and British Telecom produce sustainability reports.

### **5.3.6 Environmental management system**

An environmental management system (EMS) is a transparent, systematic process for implementing environmental goals, policies and responsibilities, and auditing these elements. EMS provides a tool for employees and managers to take environmental impacts into consideration when performing daily job functions. International Standards Organization's (ISO) 14001 or the European Union's Environmental Management and Auditing Scheme (EMAS) are examples of Environmental Management Systems.

### **5.3.7 Environmental purchasing**

Proactive companies partner with their suppliers to have a certified environmental management system. They also use a comprehensive questionnaire asking about the supplier's environmental practices and performance. Beyond looking up their value chain to their suppliers, some companies now look down the value chain too. They take steps to reduce the environmental impacts of their distribution networks and examine recyclability of their products and services. Environmental purchasing policy is measured through the specific steps taken by firms for its engagement with suppliers.

### **5.3.8 Environmental training and education**

The ability of employees to participate in environmental problem-solving as well as their motivation to do so can both be improved by strong environmental training programs. Firms offer programs that are focused on environmental, health and safety subjects and use external education opportunities such as job rotations, outside courses, and site visits.

### **5.3.9 Employee responsibility for environmental performance**

The successful implementation of corporate environmental policies and management systems depend on employee and managers being accountable for them.

### **5.3.10 Life cycle analysis (assessment) policy**

Apart from using Life Cycle Analysis (LCA) for designing products and services with reduced environmental impacts, it is also used for assessing and minimizing environmental impacts of company business processes. For example, a company tries to minimize environment impacts across the life cycle of all its processes including purchasing, manufacturing, distribution, product/service use and disposal. LCA can be an effective tool for aiding companies who are aiming for sustainable development.

### **5.3.11 Management support for sustainable development**

Management's support plays a crucial role to play in bridging the gap between traditional business processes and those necessary for the transformation into a sustainable enterprise. Some companies make line managers explicitly responsible by incorporating environmental targets into performance evaluations and linking bonuses to fulfillment of these environmental targets. Reduced uses of unsustainable sources of energy, persistent chemicals, and natural resources, as well as environmental equity are the measurements that reflect management support for sustainable development.

### **5.3.12 Fossil fuel use reduction policy, use of renewable energy/products**

Companies, which truly want to move toward sustainable development, must focus on using renewable energy sources. Biodegradable plastics and bio-based polymer products based on annually renewable agricultural and biomass feed-stocks can form the basis for a portfolio of sustainable, environmentally responsible products.

### **5.3.13 Toxic chemical use reduction policy**

Persistent toxic chemicals, because of their negative and long-term impacts on the natural environment, must be replaced by more benign substitutes. This driver is measured by ongoing projects and their periodic evaluation.

### **5.3.14 Policy of reducing use of unsustainable products**

Products, whose harvesting and use do irreparable damage to eco-systems and the natural environment, must be replaced with sustainably harvested substitutes. Biotechnology and next generation Materials Biotechnology has made a significant impact in the pharmaceuticals industry and agriculture.

### **5.3.15 Recognition to employee environmental initiatives**

Employee environmental problem solving initiatives are recognized by firms through citations and rewards. This aspect is measured through the allocation of bonus or rewards earmarked for Environmental innovations and projects.

### **5.3.16 Quantitative measures for environment**

Quantitative measures for environment include risk assessments and impact of contaminants. They also include results of restoration, environmental and economic risks, and quantitative health risks.

### **5.3.17 Qualitative measures for environment**

Qualitative measures include the identification of environmental opportunities, prioritizing environmental actions and measures, environmental differentiation in product pricing, transparency about environmentally relevant corporate activities, meeting the claims and information demands of environmental stakeholders and instituting environmental protection measures.

## **5.4 Justification of Societal drivers**

The Societal drivers adds community dimension to corporate governance, which are key aspects of the CSR agenda. There is an underlying business motivation to engrain Societal drivers into corporate strategy. This is to establish demonstrable initiatives that raise brand awareness in different communities, to develop relations for a licence to operate and developing relationships with the local community. These drivers help to develop networks, fostering a positive view of the company amongst employees and develop future employees.

### **5.4.1 Engages in fair business practices**

With the growing role of business, the social expectations are ‘what business should be doing for society’. Enterprises also value the trust of stakeholders and want closer interaction with them. For instance, an enterprise’s superior performance increasingly depends on its capacity to anticipate and adjust not only to competition and rapid technological transformation, but also to changes in the attitudes of consumers, workers, and society at large.

#### **5.4.2 Ethical behavior for all**

Management aims at ‘an embedded model’ approach (wherein employees are aligned with the philosophy of the firm) to drive sustainability throughout the organization. This applies both for the internal business system such as R&D, Product Development, Purchasing, Communications, Manufacturing and Services, as well as the extended business system consisting of suppliers and various other stakeholders including the financial community, customers, consumers, governmental and non-governmental organizations.

#### **5.4.3 Values and implements disclosure**

The Board recognizes the value of disclosures from Directors and key managerial personnel relating to material, financial and commercial transactions where they and/or their relatives have personal interest. Leads to transparency and augments trusts. An instance of disclosure norms is provided in Exhibit 5.3.

##### **Exhibit 5.2: Disclosure norms**

###### ***Healthcare products disclosure – UCLA Medical Center, Los Angeles***

The hospital requires a disclosure by their vendors of mercury concentrations in chemicals or reagents. UCLA Healthcare is committed to protecting medical information about patients. UCLA disclosure ensures that medical information is protected. Some information such as certain drug and alcohol information, HIV information and mental health information is entitled to special restrictions related to its use and disclosure.

*Source: UCLA Medical center website*

#### **5.4.4 Fosters a reciprocal relationship between the corporation and community**

Creation of cross boundary networks with the community and opinion leaders. Firm has a cultural sensitivity. Exhibit 5.4 provides evidence of reciprocal relationship between the firm and the community.

##### **Exhibit 5.3: Reciprocal Involvement with Community**

###### ***Handicap care and company image – Pressalit, Denmark***

Pressalit, a Denmark manufacturer of toilet seats and sanitary appliances for physically handicapped persons sponsored a contract with the Danish Union for Handicap Athletics. Through this strategic sponsorship, the company contributed to making cultural and leisure time activities available for handicapped persons. This led to brand awareness among potential users of their products.

*Source: www.pressalitcare.com*

#### **5.4.5 Invests in the communities in which it operates**

Company invests resources and time for partnership development with the community. Also has Communication systems are in place so that communities receive benefits in terms of information and cohesion. Exhibit 5.5 provides an instance of investment in communities.

## **Exhibit 5.5 Investment in communities**

### ***The local community as a learning laboratory - IBM***

IBM initiated 'Reinventing Education' to raise student achievements through technology solutions. The 'Wired for Learning' (WFL) platform with schools were applied to different communities. The project was implemented through a steering committee, that included IBM representative and principals of schools. Dialogues and stakeholder engagement led to ideas that were adopted by IBM. For instance, it was noted that teachers lacked network management skills and principals needed training on team building. A number of training sessions were carried out for teachers and principals.

*Source: IBM Sustainability Report*

### **5.4.6 Respects the rights of consumers**

Firms regard the opinions of their customers as they believe that they form the very basics of business. Firms have the ability to engage with customers in value creation.

### **5.4.7 Provides information that is truthful and useful**

Companies maintain sustained contact through communications systems and trust-building routines. There is an ethics policy in place that is supported by cultural norms.

### **5.4.8 Company is open to critiques**

This measure intends to gauge the management's intention to criticism and complaints with respect to stakeholder issues. Whether the firms provide clear, accurate and easily accessible information to internal and external audiences and how the company responds to criticism. It also includes the relation with the media, NGOs and affected stakeholders.

### **5.4.9 Fair practices with suppliers**

International firms are adopting 'benign manufacturing' and 'design for disassembly'. These practices actively involve suppliers in corporate decision making. They strengthen supplier ties. Stronger ties help in ensuring higher quality of incoming supplies.

### **5.4.10 Strives for a competitive return on investment**

The traditional view was that the primary purpose of the corporation is to maximize shareholder wealth (Friedman, 1962). This is being replaced by the view that the purpose is to satisfy needs within society (Freeman, 1984). From this perspective, shareholders comprise only one of many groups whose needs must be addressed. This process contributes to establishing the legitimacy of the organization within its socio-economic environment, and encourages the constant flow of resources necessary for its continued survival.

## **5.5 Justification of Stakeholder drivers**

The Stakeholder drivers provide firms the means of influencing the attitudes and perceptions of stakeholders, escalate their trust and deliver business advantage. The Stakeholder drivers enable firms to estimate, understand and manage business risks through proper engagement with the stakeholders. Corporate Responsibility is emerging as the key factor in attracting and retaining talented and diverse workforce. Stakeholder drivers like a family-friendly work environment, engaging in responsible human-resource

management, equitable reward and wage system for employees, open and flexible communications with employees and investments in employee development help in quality workforce buildup in firms.

### **5.5.1 Invests in employee development**

Employees can play an active part in external networks. Investment in employee development raises trust between each other. The employee development schemes are in place.

### **5.5.2 Provides an equitable reward and wage system for employees**

A Company considers employment scenario and standards of remuneration package of the industry while considering the reward and wage system for employees. Company links the annual variable pay increases of employees with the performance of the Company that leads to societal goals of the company.

### **5.5.3 Responsible Human Resource Management**

Firm's ability to attract and retain high quality employees depends on its human resource management. This leads to a better quality of life and good employee satisfaction index.

### **5.5.4 Exercises ethical oversight at the executive and board levels**

The Board and Management makes effort to build Societal and Environmental Compliance approach comprising the trust, mutual understanding and shared values and behaviors that bind the members of human networks and communities.

### **5.5.5 Quality products and services**

Firms embrace the total quality management practices. Technology assessment allows quality concerns to be incorporated in the early stages of product development. Quality becomes the driving force in establishing a system that meets the goals of design and quality. Exhibit 5.6 shows an instance of quality being the driving force.

## **Exhibit 5.6 Innovative quality products**

### ***The biometric template protection and Distance healthcare advancement - Philips***

As a leading technology provider, Philips research developed a privacy solution for biometric template protection. This breakthrough technology allows for the use of biometric data as a secure and accurate identification method of individuals. Philips research will continue to develop privacy solutions for various technologies, such as radio frequency identification (RFID), medical information systems and ambient home applications. The company is working on several pilot projects like DISHA (Distance Healthcare Advancement) pilot project in India. Through DISHA high quality, low-cost diagnostics will be provided to those people in India who are not addressed by the existing healthcare system. Together with local partners, governments and NGOs, these people will have access to a customized 'teleclinical' truck, equipped with diagnostic equipment, doctors and specialists providing free consultations.

*Source: Philips Sustainability Report*

### **5.5.6 Stakeholder relations**

Stakeholder relations should measure up to inform stakeholders about the changes in the company's engagement with them, to enable stakeholders to express views on the policies and to facilitate networking and the building of strong relationships.

### **5.5.7 Family work environment**

Work, life and quality determine the motivation of employee. Family work environment measures focus on working mothers and work-life quality programs. Developing such programs help employees balance work with external pressures and interests. Also the companies realize benefits regarding productivity and reduced turnover. Programs include flexible scheduling, dependent care, health and wellness programs.

### **5.5.8 Same standards globally**

A company should use the same high standards to protect human health and the environment in all places that a company operates. Thus, the higher standards that are enforced by law in developed countries in North America and Europe would be automatically applied in sustainable enterprises that operate globally. Such companies were selected who were committed to environmental sustainability, with laid down environmental policies.

### **5.5.9 Encourages new ideas**

Management's encouragement of new ideas leads to innovation on Sustainability Projects. The measurement of this driver is based on relevant and specific success of projects undertaken proactively by the employees.

### **5.5.10 Encourages experimentation**

Committed employees venture experimentation in order to develop systems and processes that are benign for the environment. Measurement of experimentation may not always be successful projects. Generally, projects are taken up in areas that pose a challenge like greenhouse gas emissions and emissions impact on eco-system.

### **5.5.11 Environmental training**

Environmental training fosters orientation to sustainability. Training helps to learn the situations and challenges through mentors, site visits and new skills. Training provides employees to focus time and motivation to engage in environmental problem solving.

### **5.5.12 Allow skill enhancement**

Skill enhancement equips employees to take risks. They see experimentation as learning opportunities. Skill enhancement allows employees to view the 'bigger' context where the firm is positioned as a node in an eco-system.

### **5.5.13 Suggestion Scheme**

Suggestion schemes encourage individuals to communicate solutions to environmental and other issues. The existence of the suggestion scheme indicates that the company encourages employees to express concerns and respond to criticisms.

### **5.5.14 Dialogue with stakeholders**

Promoting of on- and off-line communication is manifested by partnerships with NGOs, customers, suppliers and governments.

### **5.5.15 Shares company information**

Sharing company information ensures that the stakeholders get the assurance on the credibility and quality of performance of companies. This may be measured by valuable feedback received in order to improve processes. These provide the stakeholders with assurance on the credibility and quality of performance.

### **5.5.16 Flexible communications**

The firm's ability to work collaboratively with employees to create value for the organization depends on engaging in open and flexible communications. Setting up a taskforce on Responsible Transformation for employees to review practices, is an instance.

### **5.5.17 Rewards employee contributions**

Firms look for opportunities to reward good contributions from employees. In addition to the formal award systems, measurement of this driver should also include day to day feedback and praise the steps taken for solving environmental problems.

## **5.6 The key points of Societal, Environmental and Stakeholder drivers**

The Societal, Environmental and Stakeholder drivers help to disaggregate the link of Corporate Social Responsibility (CSR) or the Social Impact Management (SIM) of firms to the operational level. A manager would be able to gauge what to make of and what to do about societal, environmental and stakeholder issues in practical terms, in order to improve overall corporate performance. These drivers could be monitored to influence corporate resource allocation decisions. The drivers help in measurement of multiple activities to ensure effective management. These drivers when implemented in firms would unshackle the traditional view of discretionary CSR in favor of fiduciary responsibility focused on improving business performance (Windsor, 2006). Companies monitoring these drivers can open doors on new markets, new opportunities and new relationships, increase their competitiveness and attain long term licence to operate. These drivers help the firm to map the expectations of the surrounding world around them. Attention to supplier issues, consumer viewpoints, investor concerns implies that Corporate Responsibility is not restricted to big businesses. Companies of all sizes can benefit.

## **5.7 Key drivers for the questionnaire**

The case analysis resulted in the development of the key drivers to be used in the research instrument, the questionnaire (detailed in chapter 6). For the Societal issues, ethical

business behavior is stated as ethical business practices with internal and external stakeholders to restrict the item to stay within the realm of focus of the current research. Responsible human-resource is a general issue and needed to be oriented to 'high standards of employee ethical behavior' for the purpose of the study. Investment in the communities is presented as 'developmental projects for communities'. The items 'fair practices with suppliers' and 'rights of consumers' are included in the final list. Return of investment is not included in the key drivers list as it is more an economic issues. However, the interest with shareholders is represented by 'promotes relations with shareholders'.

The Environmental issues were streamlined by combining the similar ones. The issue of specific commitment to the environment has the following items as a subset: qualitative measures for environment, conducts training on Environment, environmental management system. Therefore they are combined into the single item. Similarly, the Written environmental policy incorporates quantitative measures for environment, targets for environmental performance and sustainability report making the first item representative of the four. The issue of sustainability through optimal use of resources is represented as reduction of use of unsustainable products. The reduction of fossil fuel use and uses of renewable energy sources are so important that they are segregated into separate items as energy conservation and targets for resource optimization. Life cycle analysis (assessment) is modified to life cycle analysis and toxic chemical use reduction policy is expressed as limits toxic chemical use. Finally the item 'eliminates use of unsustainable products' combines the two items commitment to sustainable development and commitment to the environment. The environmental purchasing policy is not included as an exclusive item in the Environmental driver category, as it is included as a societal driver as fair trade with suppliers.

Under the category of Stakeholder items, stakeholder relations is expressed as 'responds to societal and environmental issues from stakeholders', in order to emphasize the stakeholder concerns with respect to societal and environmental issues. The same logic is applied for the item board levels ethics, which is worded as 'exercises ethical approach to societal and environmental issues at board levels'. The corporation and community issues are represented as 'mutual partnership regarding societal and environmental issues'. The issues regarding 'shares important company information' and 'the company is open to critiques' is consolidated as 'dialogue with stakeholders'. The issue of quantitative measures for environment is included in the Environmental category. The remaining driver, qualitative measures for environment is broadened in its purview to be stated as 'qualitative measures for Societal and Environmental compliance'. Table 5.2 lists the key Societal, Environmental and Stakeholder drivers for the questionnaire.

**Table 5.2: Key Societal, Environmental and Stakeholder drivers for the questionnaire**

The Societal (S) drivers:	The Environmental (E) drivers:	The Stakeholder (SH) drivers:
1. ethical business practices with internal and external stakeholders	1. specific commitment to the environment	1. exercises a ethical approach to societal and environmental issues at board levels
2. high standards of employee ethical behavior	2. written environmental policy	2. responds to societal and environmental issues from stakeholders
3. developmental projects for communities	3. sustainability through optimal use of resources	3. engages in dialogue with stakeholders
4. rights of consumers	4. targets for resource optimization	4. mutual partnership regarding societal and environmental issues
5. fair trade with suppliers	5. energy conservation	5. qualitative measures for Societal and Environmental compliance
6. promotes relations with shareholders	6. life cycle analysis	
	7. limits toxic chemical use	
	8. eliminates use of unsustainable products	

## CHAPTER 6

### METHODOLOGY: QUESTIONNAIRE DESIGN AND RELIABILITY

#### 6.1 Research Instrument

The research tool used is the questionnaire. The questionnaire comprises of 20 questions (Figure 6.1). The final questionnaire has nineteen scaled items and included one open-ended question about the respondent's company, competitive advantages and actions responding to specific drivers. The applicability of the nineteen drivers were cross checked based on analysis from the study of the Sustainability reports from 1999 to 2005 of the pilot sample, that included Toyota, USA; Philips, Holland; Tata Steel, India; LG Electronics, South Korea (details in Chapter 3). The nineteen items comprise six societal drivers and eight environmental drivers and five stakeholder related drivers (Table 5.2).

The Societal, Environmental and Stakeholder drivers emerged after the comparison of the case studies of firms. Certain drivers were ranked consistently high in the societal, environmental and stakeholder driver ranks. As the firms represented different industry segments, and as they also are located in different regions with very distinct cultural characteristics, the common rankings indicate a common framework of critical drivers. They have equivalent impact in the areas of community, environment, marketplace and workplace. This is also applicable with respect to the business objectives and the opportunities gained the company by dissemination of the information collected. Significant advantages derived from the drivers were evident from the sustainability reports and other reports. (Hodkinson, 2002).

The relevant Societal drivers emerged from the comparison of the firms, that had high scores. The 'critical' Societal drivers that affect international firms, were ethical business practices with internal and external stakeholders, high standards of employee ethical behavior, developmental projects for communities, rights of consumers, fair trading with suppliers. Additional information about the company actions related to specific drivers was collected from the open-ended item and from several secondary sources: Company Sustainability Reports, the Global Reporting Initiative, CSRWire, EthicalCorp, and Covalence. For instance, the sustainability report of one firm stated that its vision statement aims to balance stakeholder needs. Specific details to substantiate this were found from company updates found from CSRWire, EthicalCorp and Covalence newsletters. Certain significant observations emerged while choosing the drivers. Not all issues were important for companies, but issues were chosen that were of significance to the business in the industry sector. Certain drivers were assessed on qualitative measures and could not be quantified. For instance, the drivers, 'engages in fair and honest business practices in its relationships with stakeholders', 'sets high standards of behavior for all employees' and 'exercises ethical oversight at the executive and board levels' provide no objective or quantitative evidence. These are gauged through qualitative measures.

The relevant Environmental drivers were: commitment to the environment for pollution control and effluent treatment, written environmental policy, sustainability through optimal use of resources, targets for reduction and disposal of wastes, engages in energy conservation, conducts a life cycle analysis and limits toxic chemical use. The Stakeholder drivers were those that emphasized the theme of sustainability with respect to ethical approach, dialogue on societal and environmental issues with stakeholders and mutual partnership for Societal and Environmental compliance.

## 6.2 Scaling

The data were generated from the responses to 19 questions in two sets. Each question has two ordinal scales:

Ordinal values:

A: This aspect is practiced in your Company						
EXTENSIVELY	<input type="radio"/>	LITTLE				
	5	4	3	2	1	

B: Agree that this increases Competitive Advantage?						
VERY MUCH	<input type="radio"/>	NOT VERY MUCH				
	5	4	3	2	1	

**Figure 6.1: Questionnaire used for the Research Survey:**

*As a Corporate executive please rate [please put a 'x' next to your choice circle]  
 For A: the extent to which each of the following aspects is applied in your Company and  
 For B: to what extent does each affect the Competitive Advantage of your Company  
 for each of the questions below:*

	A: This aspect is practiced in your Company					B: Agree that this increases Competitive Advantage?										
	EXTENSIVELY	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	LITTLE	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH					
1. Your Company engages in ethical business Practices its relationships with internal and external stakeholders	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
2. Your Company sets high standards of ethical behavior for all employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
3. Company exercises ethical approach to societal and environmental issues (that the Company's actions are good for society and the environment) at the executive and board levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
4. The company responds to societal and environmental issues from stakeholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
5. Company engages in dialogue regarding societal and environmental compliance issues with stakeholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
6. Fosters a relationship of mutual partnership between the corporation and community regarding societal and environmental issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
7. Invests in developmental projects in the communities in which it operates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
8. Respects the rights of consumers regarding good product and consumer satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
9. The Company adopts specific steps to promote investor relations with its shareholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				
10. Engages in fair trading practices with Suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	EXTENSIVELY	<input type="radio"/>	VERY MUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	NOT VERY MUCH				

<b>A: This aspect is practiced in your Company</b>	<b>B: Agree that this increases Competitive Advantage?</b>
EXTENSIVELY <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> LITTLE	VERY MUCH <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> NOT VERY MUCH

	<b>EXTENSIVELY</b>		<b>LITTLE</b>		<b>VERY MUCH</b>		<b>NOT VERY MUCH</b>					
11. Demonstrates a commitment to the environment in terms of pollution control & effluent treatment	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
12. The Company has a Written Environmental policy	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
13. Demonstrates a commitment to sustainable development through optimal use of resources	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
14. The Company achieves specific targets for reduction and disposal of wastes	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
15. The Company engages in energy Conservation	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
16. The Company conducts a Life cycle analysis (assessment) for all products	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
17. The Company limits toxic chemical use	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
18. The Company eliminates the use of unsustainable products	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								
19. The Company has qualitative measures (like recognition and awards from renowned Organizations) for Societal and Environmental compliance	<b>A</b>	<input type="radio"/>	<b>B</b>	<input type="radio"/>								

20. Specific examples: Kindly furnish any specific examples (or web references) indicating important actions taken by your company and how it affected the Competitive advantage:

\_\_\_\_\_

Name: \_\_\_\_\_ Position: \_\_\_\_\_ Email: \_\_\_\_\_

Background: \_\_\_\_\_

Name of Company: \_\_\_\_\_

Address of Company: \_\_\_\_\_

Number of years with the Company: \_\_\_\_\_

### **6.3 Comparison of Global and Asian Firms**

As common indicators are applied to analyze the global and Asian firms, it is possible to compare their orientation to societal, environmental and stakeholder aspects. The comparison would also be made with respect to the difference of how their societal, environmental and stakeholder drivers lead to improvement in business performance and competitive advantage.

### **6.4 Questionnaire Distribution**

It was important to ensure that the respondents were adequately aware to answer:

- whether the driver is applied within the company,
- whether the aspect relates to the perceived competitive advantage of the firm.

Both these sets of questions require that the respondent to be related to the company and has good knowledge about the effects of societal, environmental and stakeholder initiatives and its effect on competitive advantage.

Questionnaires were emailed to 250 companies from the US and Asia selected from the GRI lists. The names of relevant personnel from the sample companies were found from the Sustainability reports of the respective companies by searching the CSRwire web pages on Sustainability reports. In case they were not available, emails were sent to the company 'contact us' facility. Their email addresses were found from the Company Sustainability reports, other CSR Agencies (Ethical Corp and Covalence) and through contacts.

These included members of the top management team, director of corporate social responsibility, specialists on the environment, health and safety and line or operating managers. Some responses were received with completed questionnaires. About fifty other emails were received, where respondents expressed their appreciation for such research effort, but expressed regret for not being able to fill up the questionnaire as because of 'confidentiality' reasons.

Respondents were also contacted through delegates from companies attending Conferences in USA, Europe and Asia. The conference approach was chosen as they provided a focused audience, as the theme of the conferences was related to Corporate Social Responsibility. The delegates in such conferences were personnel representing International firms included in the sample and otherwise. Confidentiality was assured regarding the responses received. The company response rate was 22 percent, that is, 55 out of 250. The response rate was limited.

### **6.5 Data sources and access to companies**

In this research the main challenges are two fold: (i) getting access to relevant Company Executives for the Sample chosen (ii) getting the proper EVA values for at least five years (2000 to 2004). EVA Reports are published annually by Stern and Stewart USA, Europe and Asia and were not readily accessible due to its high has a price tag. However, relevant portions of the EVA report for the five years were provided gratis courtesy Stern and Stewart, USA and Asia. The data collected from the questionnaires and the EVA values for the sample companies were tabulated using excel.

## 6.6 Response Bias

The respondents had to express their positions on two aspects: ‘this driver is practiced in your company’ and ‘agree that this increases competitive advantage’. Both these responses could have bias, as some company executives might express a better than real picture about their firm, while others could provide a below par answer, which may not be a true reflection of the societal, environmental and stakeholder standards about their own company.

In order to minimize response bias, the questionnaire responses were scrutinized and correlated with evidence from Company Sustainability reports, CSR wire Company reports, EthicalCorp reports and other secondary sources. Some examples are highlighted in Table 6.2.

**Table 6.2: Societal, Environmental and Stakeholder initiatives in sample firms:**

- ISO 14000 Certification for Environmental Compliance (Tata Steel).
- Fortune magazine's ‘America's Most Admired Companies’ 1994 - 2005 and SA 8000 Global Leadership Award, 2002 (Avon).
- Achieved 40 to 50% reduction of cold drink equipment's impact on climate change. For Waste water discharge, achieved 100% of target (CocaCola Environment Report 2004).
- Eco-magination, an initiative to bring to market new technologies that will help customers meet pressing environmental challenges, was introduced for General Electric. GE has an extensive Ombudsperson process that serves as a mechanism for employees to ask questions and report integrity concerns without fear of retaliation.
- Business groups apply ‘reduce, reuse and recycle’ to optimize business processes and saved more than \$7.5 million in 2004 and lead free microprocessors, chipsets and embedded processors in 2004 (Intel).
- Intel's T-Comp—or Total Compensation—approach aligns company, employee and stockholder interests, and provides employees with an incentive to focus on meeting and exceeding business objectives (Intel).

## 6.7 Validity

Validity is the assessment of the correspondence of the drivers that are included in the questionnaire with the measurement scale and their definition. The content validity was subjectively assessed by the Advisor, the members of the Program committee and the Review panel of two Doctoral Colloquiums where the draft research paper was presented. The validity of the scale is the extent to which it accurately measures the drivers (Hair, 2006).

## 6.8 Reliability Analysis

Cronbach's alpha is used to determine the reliability of a measure as to how well the set of items measures the latent construct. Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. As the number of items increase, the Cronbach's alpha increases. Additionally, as the average inter-item correlation increases, Cronbach's alpha increases as well.

The reliability of the measure is vital for the research outcomes as there is limited or no audited data on the societal, environmental and stakeholder drivers and their explicit effect on competitive advantage. The respondents’ viewpoints are cross-checked with secondary

data from non-company sources like publications of Sustainability promotion associations like EthicalCorp and CSR wire. These measures reflect only a limited aspect of an organization's societal, environmental and stakeholder performance. Because of these limitations, a self-analysis measure through company case studies was designed based on a 44 item five-point Likert-scale to select the final 19 items for the questionnaire. In order to externally validate this measure, the construct was reviewed by panelists at two Doctoral Colloquiums and the members of the Research Program Committee.

**Table 6.3: Reliability analysis based on EVA**

Reliability Analysis (EVA)

Scale: Cronbach's Alpha)

Alpha = 0.7421

Scale reliability was performed from two perspectives, viz., based on EVA and based on perceived Competitive advantage. Scale reliability based on EVA (Cronbach's alpha) is around 0.75 (Table 6.3) which is satisfactory and indicates that the set of items that measures the latent construct is satisfactory.

Similarly, Scale reliability based on perceived Competitive Advantage (Cronbach's alpha) is 0.93 (Table 6.4) is also satisfactory.

**Table 6.4: Reliability analysis based on perceived Competitive Advantage**

Reliability Analysis (perceived Competitive Advantage)

Scale: Cronbach's Alpha

Alpha = 0.9314

## **CHAPTER 7**

### **SAMPLE**

#### **7.1 Sample**

The sample was chosen from Asian and US international firms in order to achieve an appropriate spread of CSR influences in terms of socio-economic and market-based influences. The US has played a leading role in CSR practices, while Asia is a region with a lot of promise and potential and is the focus of attention of global investors. The socio-political, regulatory and economic situations and contexts of the two regions are distinct. It is assumed that companies from the two regions have developed management approaches and corporate strategies in line with their respective national circumstances.

The sample represented industrial segments like automotive, computers and office equipment, semiconductors and hardware, food services, network and communications and others (Table 7.1). The industry segments, the number of companies from the respective segments and the revenues for the year are tabulated in Table 7.1. The names of the companies are not displayed due to the condition of anonymity given while filling up the questionnaire. However the entire sample details were given to the Research Committee and the Committee Chairman.

Table 7.1 indicates the sample summary showing the industry segments represented size in terms of turnover in million US dollars for the year 2005. Most of the segments selected have fair representation from US as well as Asia companies. However, industry segments computers and office equipment, entertainment and mail freight delivery are only represented for US and the airline segment has representation from Asia. The main focus is to analyze the societal, environmental and stakeholder practices of international companies from as many industry segments as feasible depending on the availability of respondents.

**Table: 7.1 Sample characteristics, size, industry**

Characteristics	USA		Asia	
	Company	Revenues for 2005 (US\$ million approx)	Company	Revenues for 2005 (US\$ million approx)
Industry:				
- Automotive	Company U1	177200	Company A1 India	570
	Company U2	5600		
- Computers, Office Equipment	Company U3	86000		
	Company U4	56000		
	Company U5	15700		
	Company U6	13900		
- Semiconductors & Hardware	Company U7	38800	Company A2 Taiwan	2500
- Food Services	Company U8	6300	Company A3 Malaysia	31300
	Company U9	7000		
	Company U10	20500		
	Company U11	10100		
	Company U12	4100		
- Network & Communications	Company U13	24800	Company A4 Singapore	13100
	Company U14	36,800	Company A5 Indonesia	20700
			Company A6 Thailand	3141
			Company A7 South Korea	10700
- Soft Drinks & Beverages	Company U15	1400	Company A8 Thailand	330
	Company U16	11900	Company A9 Hong Kong	160
- Equipment scientific & industrial	Company U17	14200	Company A10 Japan	31800
- Healthcare & Pharmaceuticals	Company U18	51300	Company A11 India	760
	Company U19	50500	Company A12 India	15
	Company U20	18700		
- Metals	Company U21	26600	Company A13 India	4850
- Internet services retailing	Company U22	4500	Company A14 Singapore	640
- Household Personal products	Company U23	56700	Company A15 Malaysia	860
	Company U25	- na -	Company A16 India	412
	Company U26	11400		
	Company U27	8100		
- Entertainment	Company U28	32000		
- Diversified Manufacturing	Company U29	157000	Company A17 Australia	20700
- Mail Freight delivery	Company U30	42500		
- Electronics, Electrical Equipment			Company A18 South Korea	71500
			Company A19 Hong Kong	1500
			Company A20 India	- na -
- Power Generation			Company A21 China	- na -
			Company A22 Thailand	5200
- Airlines			Company A23 Thailand	4270

## 7.2 Sample participants

Based on the Conceptual model, participating managers are selected from (a) international companies from developed countries (USA and Europe) and (b) international companies from Asia. The Companies chosen qualified according to the criteria of Corporate

Responsibility Standards that address all the three pillars of sustainability economic, societal and environmental. The Global Reporting Initiative offers the most comprehensive array of sustainability themes and metrics and is increasingly gaining the acceptance of the international business community. However, random selection was not possible due to accessibility problems in terms of response from firms. The scale of data collection needed to ensure randomness is beyond the scope of this research. The target sample included 30 international companies from the USA, 16 from Europe and 19 from Asia. Companies represented different industrial segments including health care, automotive, energy, technology hardware, fast food, food & beverage, equipment, construction, chemicals, textiles and others. While choosing the participants, a criterion was that all of them qualified the triple bottom line metrics and featured in GRI/ EMAS/ FTSE or SA 8000 indices. The reason for this was that the focus of this study is to find whether companies with a track record of Societal and Environmental compliance evidenced an association with improved competitive advantage as measured by Economic Value Added.

### **7.3 Company profiles**

Progressive and responsible International firms publish their societal and environmental performance reports on the Internet. From a content analysis of such performance reports the following information was identified: (1) how are the firms placed in terms of the societal and environmental compliance parameters? (2) specific instances to support how are corporations pursuing societal and environmental compliance? (3) what factors contribute to the success of societal and environmental compliance practices in International firms? (4) how do corporate environmental citizenship and social responsibility activities contribute to business performance and competitive advantage?

### **7.4 Sample heterogeneity**

Heterogeneous populations have the advantage of variability. Also, the approaches of companies are varied with respect to Corporate Social Responsibility. The dependent variable, Economic Value Added can be affected by many other influences like marketing strategy, cost control policies and technological innovation. Societal, Environmental and Stakeholder initiatives could only be a part of such activities. In order to ensure sample heterogeneity sample companies were selected to represented different industrial segments including health care, automotive, energy, semiconductors and hardware, food services, soft drinks & beverages, equipment and others. But as the sample companies were selected from the GRI (Global Reporting Initiative) or have established Sustainability agenda, there were obvious exclusions of firms that do not feature in the GRI or who do not publish reports. There is positive bias in selection of the sample companies as they were mostly from GRI or had proven evidence of sustainability standards. The key implication for this positive bias of choosing GRI is that the sample firms focused on socioeconomic and sustainability standards. Hence it is expected that the sample companies that were selected would exhibit superior societal, environmental and stakeholder standards. This positive bias would not hinder the objective of the research of establishing the relative influence of the societal, environmental and stakeholder drivers on competitive advantage as assessed by EVA.

Also, there were companies who declined to respond to the questionnaire due to reasons like confidentiality, glut of similar requests or the issue needed the clearance of the top management. To maintain the required number of the sample, such companies were

replaced by others from the GRI. In spite of this constraint, sample heterogeneity was maintained as there were adequate firms under each sub class of high positive, low positive and negative EVA.

## 7.5 Data summary

The responses received from fifty five companies were tabulated. Table 7.2 summarizes the average scores from the responses. The tabulation of data considered EVA over a five year period, i.e. 2000 to 2004, and the average EVA was considered.

Questionnaire responses were summarized to find average score for Societal drivers, average score for Environmental drivers, average score for Stakeholder drivers and average score Competitive advantage generated using the specific drivers from the respondents' opinion. The average Societal, Environmental and Stakeholder drivers' data are shown in Table 7.2. It also included the average perceived Competitive Advantage with respect to Societal, Environmental and Stakeholder initiatives.

**Table 7.2: Summary tabulation of the survey responses**

Questionnaire Survey Tabulation: Sample: USA(Total 30 firms) Sample: ASIA(Total 25 firms)	USA	Asia
	Hi Pos EVA (Total 7 firms) Average	Hi Pos EVA (Total 8 firms) Average
Avg EVA (Million US\$)	2407.76	422.40
Avg Societal Drivers	4.31	3.81
Comp Adv driven by Societal Drivers	3.43	4.20
Avg Environmental Drivers	3.73	3.85
Comp Adv driven by Environmental Drivers	2.68	3.68
Avg Stakeholder Drivers	3.77	3.82
Comp Adv driven by Stakeholder Drivers	2.91	3.87
Sample: USA(Total 7 firms) Sample: ASIA(Total 7 firms)	USA	Asia
	Lo Pos EVA (Total 7 firms) Average	Lo Pos EVA (Total 7 firms) Average
Avg EVA (Million US\$)	253.99	33.52
Avg Societal Drivers	4.10	3.44
Comp Adv driven by Societal Drivers	3.76	3.86
Avg Environmental Drivers	3.66	2.88
Comp Adv driven by Environmental Drivers	3.27	3.23
Avg Stakeholder Drivers	3.89	3.07
Comp Adv driven by Stakeholder Drivers	3.63	3.70
Sample: USA(Total 16 firms) Sample: ASIA(Total 10 firms)	USA	Asia
	Neg EVA (Total 16 firms) Average	Neg EVA (Total 10 firms) Average
Avg EVA (Million US\$)	-993.83	-71.76
Avg Societal Drivers	3.82	3.82
Comp Adv driven by Societal Drivers	3.57	3.75
Avg Environmental Drivers	3.34	3.46
Comp Adv driven by Environmental Drivers	3.03	3.18
Avg Stakeholder Drivers	3.43	3.56
Comp Adv driven by Stakeholder Drivers	3.19	3.50

## 7.6 Differences in EVA

Notably, firms differed in terms of levels of EVA. Sample companies were be classified into three groups based on: (i) High Positive EVA (ii) Low Positive EVA and (iii) Negative EVA.

The EVA framework is a function of capital employed, the cost of capital and the return on capital employed. The concept of negative EVA may be explained based on the difference of return on capital over its total capital. This economic value added is translated into an increased intrinsic value. Companies with negative EVA destroy economic value, which results in a lower intrinsic value per share. There were seven firms with high positive EVA of USA, ranging between US\$ 6930.61 million to US\$ 572.82 million. For instance, General Electric USA has average EVA of US\$ 6930.61 and was leading the High Positive EVA category of US firms. Eight firms in Asia were classified as high positive EVA, ranging between US \$ 523.09 million to US\$ 90.88 million. Likewise, Singapore Telecom from Asia averaged as leader in the high positive EVA category, with average EVA of US\$ 523.09 million. Low positive EVA firms from USA ranged from US\$ 439.40 million to US\$ 56.07 million on an average for 2000 to 2004. The same range for Asia was US\$ 79.42 million and US \$ 19.28 million. There were seven companies each in the low positive EVA category. The negative EVA category was relatively larger with sixteen firms from the USA and ten from Asia. For instance, Hewlett Packard from US had an average EVA of US\$ minus 1801.76 million and belonged to this category in the range of US\$ minus 65.52 million and US\$ minus 3658.54 million. Tata Steel, India had an average EVA of US\$ minus 216.61 million and belonging to this group with the range US \$ minus 2.27 to US\$ minus 216.61 million.

The detailed list comprising the average Societal, Environmental and Stakeholder drivers along with the average competitive advantage score as perceived by the respondents with respect to each driver type was tabulated. The summary (Table 7.2) also indicates the difference in the average values of the scores on respective sets of drivers for the US sample and the Asian sample. For instance, for the high positive EVA for the USA firms, the average Societal driver, average Environmental driver and average Stakeholder driver scores are 4.31, 3.73 and 3.77. The corresponding score for competitive advantage as perceived by the respondents that are driven by the societal, environmental and stakeholder drivers are 3.43, 2.68 and 2.91 respectively. The respective scores for high positive EVA for Asia were 3.81, 3.85 and 3.82. The average scores for USA were higher. This implies that societal, environmental and stakeholder drivers for the USA companies with high positive EVA companies have greater effect on EVA than for Asian companies. As EVA is the difference between the return on a firm's capital and the cost of capital, the firm size in terms of high EVA matters. Firms like Google, Nike, Gap, Microsoft and Wal-Mart, based in the USA, draw more public attention due to competitiveness and market performance, than firms in Asia. Associated with the growth are societal, environmental and stakeholder linked controversy. This would be further tested for significant difference in section 8.5. This would be further tested for significant difference in section 8.5.

## **CHAPTER 8**

### **THE IMPACT OF DRIVERS ON EVA AND COMPETITIVE ADVANTAGE**

#### **8.1 Regression analysis**

Linear regression was performed with different dependent variables, like EVA and Competitive advantage. The Linear regression is adopted because the relation of the response to the explanatory variables is assumed to be a linear function of the independent variables. Regression was conducted with Societal drivers, Environmental drivers and Stakeholder drivers as independent variables and Economic Value Added as dependent variable. Initial analysis identified which are the critical Societal, Environmental drivers which significantly affect the Economic Value Added of International firms in USA and Asia.

Four models were used for regression. Model 1, for USA based firms with EVA as dependent variable, model 2 is similar regression model for Asian firms. The combined USA and Asian firms, along with EVA as the dependent variable and with location variable is used in model 3. Finally, model 4 has combined USA and Asia sample as dependent variable EVA, with control variables Gross Domestic Product and location variable.

#### **8.2 Control variables**

In order to get a comparative picture of the combined sample including firms from USA and Asia, a location variable was introduced as an independent variable. All firms based in the USA are assigned '1' and those based in Asia given '0'. Firms in the US are generally perceived to have greater resources and higher EVA. For instance the high positive EVA for the US companies ranged between US \$ 6930 million and US \$ 572 million as compared to US\$ 1274 million and US \$ 90 million for Asian firms. The EVA values for the US firms are much higher. Combined regression analysis with the location control variable enables a comprehensive picture. This facilitated the comparison between USA and Asian firms. This enables to see the overall effect of the societal, environmental and stakeholder drivers on EVA for the international firms for the combined sample from Asia and USA.

Regression setup 4 adds the GDP factor as a control variable. This control variable facilitates the analysis whether different levels of GDP have any effect on the Societal, Environmental and Stakeholder drivers.

#### **8.3 Findings**

The regression analysis (Table 8.1) exhibited significant relationships. For the USA companies, the Societal, Environmental and Stakeholder drivers explained 24 per cent of the EVA (Table 8.1, setup1). R squared of 24 percent measures the goodness-of-fit of the estimated sample regression line in terms of the proportion of the variation in the dependent variable (EVA) explained by the fitted sample regression equation. Thus, the value of R squared of 0.24 means that 24 percent of the variation in EVA is explained or accounted for by the independent variables. This information assesses the overall accuracy of the model.

This implies that firms need to focus not only on their financial performance, but also on the Societal, Environmental and Stakeholder initiatives. The Regression analysis for the Asian sample (Table 8.1, model 2) resulted in the Societal, Environmental and Stakeholder drivers accounting for 6 per cent of EVA. This means that only 6 percent of the variation in EVA is accountable by the independent variables. Societal, Stakeholder and Environmental drivers are significantly more positively related to Economic Value Added in international firms in the USA than those in Asia, which supports Hypothesis 1.

In regression model 3 (Table 8.1), the location variable is introduced. Results indicate that 45 percent of the dependent variable, EVA is explained by the location variable and the societal, environmental and stakeholder drivers. Therefore, the introduction of the location variable improves the explanation to a considerable 45 percent for USA and Asia considered together (model 3 in Table 8.1). The location of the firm has a major effect on the EVA. Regression setup 3 shows statistical significance for the independent variables like the societal drivers (beta 0.460 at p 0.00) and the location variable (beta - 0.321 at p 0.00). The negative beta value for the regression analysis is examined as follows. The regression process seeks to determine what independent variables (or characteristics) are most predictive of a dependent variable. In this case, the dependent variable is the EVA value of either US or Asian firms. The independent variables are a set of characteristics that affect the dependent variable, viz., societal, environmental and stakeholder drivers. The location variable has a negative beta, meaning that the location of the firm is a significant negative predictor of EVA. Regression models 1 and 2 did not exhibit any statistical significance for the most of the drivers with the exception for the Societal drivers. The Societal drivers are significant for model 1 (beta 0.443 at p 0.05) as well as model 3 (beta 0.460 at p 0.00). This reiterates the significance of Societal drivers like ethical business practices with internal and external stakeholders, high standards of employee ethical behavior and developmental projects for communities for US firms as well as for the combined US and Asia sample.

The result that Societal, Environmental and Stakeholder drivers for the international firms in Asia explain only 6 percent of EVA as compared to 24 percent for USA, needs closer examination. Mostly USA based firms have higher levels of revenue (Table 7.1) than Asian counterparts. This improves such firms' ability to invest in CSR. For instance Coca Cola in the US invests to provide accurate measures for nutritional labeling. Though Singapore and Japan can justify this explanation, but India has a high ranking on CSR in Asia in spite of having a low GNP per capita (Chambers, et.al, 2003). Asian cultures have long-standing philanthropic practices which are grounded in religious traditions. Asian firms have also been influenced by global companies entering the new Asian markets. CSR difference could be due to a combination of nationally distinctive features. Though the Asian companies are groomed in a tradition of philanthropy, the Environmental and Stakeholder drivers are more of a contribution from the west, and are yet to consolidate in Asia. The evidence for this is seen from Philips' Life cycle analysis, Eco Vision and lead-free soldering and mercury reduction. All these required considerable investment and were in response to intense campaigning from pressure groups. But in case of Tata Steel, which has distinguished track record of CSR, has no distinct evidence of reduction of fossil fuel use. This could be the explanation for the difference between influence of the drivers on EVA between USA and Asia.

The expectation that firms from USA have higher levels of economic wealth than Asian counterparts results in higher spending on CSR initiatives was tested through regression

setup 4 (Table 8.1). Though there is no statistical significance (R square 0.105), the beta value for GDP is minus 0.114 has interesting implications that lower GDP leads to higher EVA. Developing countries in Asia, that have much lower GDP, can tailor their societal, environmental and stakeholder initiatives to improve EVA. Therefore higher GDP is not a precondition for firms to embark on sustainability investments in order to undertake societal, environmental and stakeholder initiatives.

Regression model 1 (Table 8.1) indicates that among the drivers, the social actions are the more important (0.443 at 0.05) for USA firms. Societal drivers have more influence than Environmental and the Stakeholder drivers. Companies value their corporate reputation. In this research the selected societal drivers deal with reputation related indicators like ethical business practices, developmental projects for communities, rights of consumers and fair trading with suppliers. While, the Environmental drivers, like pollution control and environmental policy, and the Stakeholder drivers like dialogue with stakeholders and mutual partnership are not related. When activists and the media publicize the societal issues, firms immediately elevate these issues to the 'top of the corporate agenda'. For instance, Citigroup to revised their strategy of project financing to corporations that were operating in rain forest as they were extracting wood and other products due to sustained pressure by the NGO Rainforest Action Network (RAN). Citigroup adapted a Environmental and Social Risk Management Policy based on the Equator Principles into its financing policy. Although the importance of the Environmental and Stakeholder issues could be far-reaching in the long run, they need more time to acquire the 'critical mass' of highest focus. The above example may be extended to observe the critical mass effect. Subsequently to Citigroup, JP Morgan Chase and Bank of America also adopted similar sustainable policies to finance logging projects in the rain forest. Examples of Environmental issues like 'greenhouse gases and global warming' and Stakeholder issues like 'poverty alleviation vis-à-vis prosperity from oil business' in third world countries have limited effect as compared to Societal issues like 'corporate ethical practices'.

**Table 8.1: Regression Analysis with EVA as the dependent variable**

Model 1: USA Dependent variable EVA		
Societal drivers	0.443	(0.05)
Environmental drivers	- 0.324	( ns )
Stakeholder drivers	0.309	( ns )
R square	0.242	(0.06)
Model 2: Asia Dependent variable EVA		
Societal drivers	- 0.206	( ns )
Environmental drivers	0.224	( ns )
Stakeholder drivers	0.140	( ns )
R square	0.057	( ns )
Model 3: Combined USA and Asia sample Dependent variable EVA, with Location variable USA = 1, Asia = 0.		
Location	- 0.321	(0.00)
Societal drivers	0.460	(0.00)
Environmental drivers	0.148	(0.31)
Stakeholder drivers	0.064	(0.66)
R square	0.446	(0.00)
Model 4: Combined USA and Asia sample Dependent variable EVA, with Control variables: Gross Domestic Product and Location variable (USA = 1, Asia = 0).		
GDP	- 0.114	( -ns- )
Location	0.052	( -ns- )
Societal drivers	0.271	( -ns- )
Environmental drivers	- 0.164	( -ns- )
Stakeholder drivers	0.190	( -ns- )
R square	0.105	( -ns- )

#### 8.4 Regression analysis with perceived Competitive Advantage

Regression analysis is also done with Competitive Advantage as perceived by the respondents as the dependent variable (Table 8.2 regression models 5 and 6). The results show that 52 percent of the perceived Competitive advantage is explained by the Societal, Environmental and Stakeholder drivers for USA based International firms. Societal drivers (beta 0.562 at p 0.00) are most important for the USA. For the next model of Regression for Asian firms (Table 8.2 models 6), indicate that about 30 percent of the Competitive advantage as perceived by respondents is explained by the sets of drivers.

**Table 8.2: Regression Analysis with Competitive Advantage as perceived by the respondents as the dependent variable**

Model 5: USA Dependent variable Competitive Advantage		
Societal drivers	0.562	(0.00)
Environmental drivers	0.068	(0.72)
Stakeholder drivers	0.179	(0.31)
R square	0.516	(0.00)
Model 6: Asia Dependent variable Competitive Advantage		
Societal drivers	0.413	(0.14)
Environmental drivers	0.201	(0.45)
Stakeholder drivers	0.028	(0.92)
R square	0.293	(0.05)
Model 7: Combined USA and Asia sample Dependent variable Competitive Advantage with Location variable USA = 1, Asia = 0.		
Location	- 0.321	(0.00)
Societal drivers	0.460	(0.00)
Environmental drivers	0.148	(0.31)
Stakeholder drivers	0.064	(0.66)
R square	0.446	(0.00)
Model 8: Combined USA and Asia sample Dependent variable Competitive Advantage with Control variables: Gross Domestic Product and Location variable (USA = 1, Asia = 0).		
GDP	- 0.629	(-ns- )
Location	0.306	(-ns- )
Societal drivers	0.458	(0.00)
Environmental drivers	0.160	(-ns- )
Stakeholder drivers	0.062	(-ns- )
R square	0.450	(0.00)

Table 8.2, regression model 8 considers the influence of the control variables GDP (Gross Domestic Product) and location on the perceived Competitive advantage. Notably the model shows statistical significance for the overall effect of the independent variables, societal, environmental, stakeholder drivers, location and GDP on the dependent variable, perceived Competitive advantage. 45 percent of the perceived Competitive advantage is explained by the independent variables (R square 0.45 at p value 0.00). R squared of 45 percent estimates the proportion of the variation in the dependent variable (perceived Competitive Advantage). Thus, the value of R squared of 0.45 means that 45 percent of the

variation in perceived Competitive Advantage is explained or accounted for by the independent variables. This information assesses the overall accuracy of the model. The beta value for GDP is - 0.629 has no statistical significance.

Table 8.2 independent variables show a much higher contribution of 52 percent and 30 percent to explain their effect on perceived Competitive advantage. This has an important implication. EVA is an 'objective' determinant, while Competitive Advantage as perceived by respondents is an 'internal' determinant of Corporate value.

It is necessary to explain the contention that EVA is an 'objective' determinant. Economic Value Added depends on capital employed, return on capital employed and cost of capital. The economic value generated is translated into an increased intrinsic value, but more importantly, to an increased market value (van Doorn, 2005). The principal determinants of the EVA are return on capital employed and the cost of capital. The return on capital employed is actually internally determined by the decision steps by the top management of the firm. But the cost of capital is determined by the market conditions which is an 'external' condition, on which the firm has little control. But the overall effect of EVA is more of an 'objective' determinant of market value of the firm.

The respondents' perception of the effect of societal, environmental and stakeholder drivers on Competitive advantage is more than double than the EVA which is a market determined objective index. The underlying inference is that the objective market forces view the drivers as lesser determinants of EVA than other economic and financial factors. But the importance of the societal, environmental and stakeholder drivers are perceived more at the operational level within firms. In case of both the 'objective' EVA model and the 'internal' perceived Competitive advantage model, Societal drivers are significant (beta 0.460 at p value 0.00). Therefore the Societal drivers are important for firms to put their primary focus on.

The Conceptual framework (Figure 4.1) proposes that the EVA is influenced by the societal, environmental and stakeholder drivers as well as the perceived Competitive advantage. This is examined in the Regression analysis (Table 8.3) utilizing EVA as the dependent variable and perceived societal, environmental and stakeholder perceived advantage as the independent variables. The relationship is not significant.

**Table 8.3: Regression Analysis with EVA as dependent variable with perceived Competitive Advantage**

Model 9: USA Dependent variable EVA		
Societal Competitive Advantage	0.368	(- ns -)
Environmental Competitive Advantage	- 0.250	(- ns -)
Stakeholder Competitive Advantage	- 0.107	(- ns -)
R square	0.064	(- ns -)
Model 10: Asia Dependent variable EVA		
Societal Competitive Advantage	0.432	(- ns -)
Environmental Competitive Advantage	0.010	(- ns -)
Stakeholder Competitive Advantage	- 0.055	(- ns -)
R square	0.166	(- ns -)
Model 11: Combined USA and Asia sample Dependent variable EVA with Location variable		
Location	0.018	(- ns -)
Perceived Societal Competitive Advantage	0.301	(- ns -)
Perceived Environmental Competitive Advantage	- 0.188	(- ns -)
Perceived Stakeholder Competitive Advantage	- 0.067	(- ns -)
R square	0.045	(- ns -)

### 8.5 Summary of the Regression findings

For USA companies, the Societal, Environmental and Stakeholder drivers explained 24 per cent of the EVA and for the Asian sample accounted for 6 per cent of EVA. After introducing the location variable, the influence of the independent variables increases to 45 percent of the EVA. The location of the firm in the US has a major effect on the EVA. The Societal driver (beta 0.443 at p 0.05) for regression model 1 and the same for (beta 0.460 at p 0.00) for model 3 emphasizes the importance of Societal drivers for US firms as well as for firms in the combined sample.

Regression analysis done with Competitive Advantage as perceived by the respondents as the dependent variable offered noteworthy results. The results show that 52 percent of the perceived Competitive advantage is explained by the Societal, Environmental and Stakeholder drivers for USA and 30 percent for Asia. This was much higher than 24 percent for US and 6 percent for Asia. The inference for this is that the ‘objective’ EVA view the drivers as lesser determinants than the ‘internal’ perceived Competitive advantage.

**Table 8.4: Summary of Hypotheses testing**

<b>Hypothesis</b>	<b>Particulars</b>	<b>Sig</b>	<b>Results</b>
Hypothesis 1a	Societal drivers are significantly related to the Economic Value Added of firms.	(0.00)	<i>Hypothesis supported</i>
Hypothesis 1b	Environmental drivers are significantly related to the Economic Value Added of firms.	- ns -	<i>-not supported-</i>
Hypothesis 1c	Stakeholder drivers are significantly related to the Economic Value Added of firms.	- ns -	<i>-not supported-</i>
Hypothesis 2a	Societal drivers are significantly related to the perceived Competitive advantage.	(0.00)	<i>Hypothesis supported</i>
Hypothesis 2b	Environmental drivers are significantly related to the perceived Competitive advantage.	- ns -	<i>-not supported-</i>
Hypothesis 2c	Stakeholder drivers are significantly related to the perceived Competitive advantage	- ns -	<i>-not supported-</i>

Table 8.4 summarizes the results. Support for Hypothesis 1a was provided by statistically significant relationships between Societal drivers and Economic Value Added of firms. This indicates that societal drivers are positively related to Economic Value Added. Hypothesis 2a is supported. None of the other Hypotheses 2b and 2c are supported. Thus, there is no statistical evidence that Societal drivers are significantly related to the Competitive advantage as perceived by the respondents. These results are interpreted in the discussions (section 11) and implications sections (section 12).

## CHAPTER 9 ANALYSIS: ANOVA

### 9.1 ANOVA analysis

The conceptual framework also posed whether there are any significant Societal, Environmental or Stakeholder drivers for EVA. In Table 9.1 the critical Societal and Environmental drivers relevant to a firm at a specific time span (2004 to 2005) were identified. ANOVA was performed for each of the items in the respective driver sets. The Societal drivers have six items.

ANOVA Post Hoc tests (multiple comparisons) were performed. The ANOVA test compare means from independent groups. While rejecting the null hypothesis it is concluded that at least one population mean differed. When the overall ANOVA results are significant, it is concluded that not all the population means are equal. In the ANOVA Post Hoc tests, the means are compared two at a time in the form of post hoc (after-the-fact) comparisons.

ANOVA Post Hoc tests (multiple comparisons) for the firms from USA, identified significant differences for ethical business practices with internal and external stakeholders (p value 0.01), developmental projects for communities (p value 0.04), rights of consumers (p value 0.00) and fair trading with suppliers (p value 0.03). Similar post hoc tests showed significant differences between Environmental drivers for USA firms with environmental commitment for pollution control and effluent treatment (p value 0.00), written environmental policy (p value 0.08), targets for reduction and disposal of wastes (p value 0.06), annual environmental and/or sustainability report (0.02), conducts life cycle analysis (p value 0.00), limits toxic chemical use (p value 0.03) and eliminates the use of unsustainable products (p value 0.08). For USA firms, the Stakeholder drivers were not significantly different.

**Table 9.1 Significant drivers for EVA**

<b>USA: Significant Societal drivers</b>	ethical business practices with internal and external stakeholders (1)
	developmental projects for communities (7)
	rights of consumers (8)
	fair trading with suppliers (10)
<b>USA: Significant Environmental drivers</b>	environmental commitment for pollution control and effluent treatment (11)
	written environmental policy (12)
	targets for reduction and disposal of wastes (14)
	annual environmental and/or sustainability report
	conducts life cycle analysis (16)
	limits toxic chemical use (17)
<b>ASIA: Significant Societal drivers</b>	eliminates the use of unsustainable products (18)
	high standards of employee ethical behavior (2)
	developmental projects for communities (7)
	rights of consumers (8)

For the Asian firms, only three Societal drivers exhibited significant differences. They were high standards of employee ethical behavior, developmental projects for communities and rights of consumers.

Among the significant Societal, Environmental and Stakeholder drivers, two Societal drivers are common for USA as well as Asian firms. These significant drivers are relevant for international companies entering Asia as well for Asian firms trying to enter markets in the West.

## 9.2 Stages of ANOVA

ANOVA Post Hoc tests were conducted to identify whether there is significant difference with respect to Societal drivers, Environmental drivers and Stakeholder drivers and different levels of EVA for the sample international firms of the USA. In the overall ANOVA analysis, no significant differences are expected as the selection of the sample firms are from the GRI that already exhibit societal, environmental and stakeholder responsibility. But differences are expected by the level of EVA.

At the initial stage of ANOVA, the Societal, Environmental and Stakeholder drivers were compared with Economic Value Added between US and Asian firms. These are presented in Table 9.2. Following this, the drivers were compared with perceived Competitive advantage between US and Asian firms (Table 9.3). Subsequently, the drivers were compared with levels of EVA for USA (Table 9.4) and levels of EVA for Asia (Table 9.5). There are three levels of EVA, high positive, low positive and negative EVA. After these, sets of drivers were compared with respective EVA levels of US and Asian firms (Table 9.6). During the next stage of ANOVA, drivers were compared with perceived Competitive Advantage for levels of EVA of US firms (Table 9.7) and of Asian firms (Table 9.8). Finally, the sets of Societal, Environmental and Stakeholder drivers are compared with perceived Competitive Advantage for respective EVA levels for US and Asian firms (Table 9.9).

## 9.3 Relevant findings from ANOVA analysis

Initially (Table 9.2) it is used to compare the means of Societal, Environmental and Stakeholder drivers with Economic Value Added between the firms in USA and Asia.

**Table 9.2: Comparing Drivers and EVA**

	EVA		
	USA	Asia	p value
Societal drivers	3.86	3.72	( - ns - )
Environmental drivers	3.32	3.46	(0.08)
Stakeholder drivers	3.58	3.53	( - ns - )

For USA firms, the scores of the Societal and Stakeholder drivers are higher than that for the Asian firms with respect to EVA. The Societal drivers in USA had higher score of 3.86 as compared to 3.72 for Asia. Similarly, the score for Stakeholder drivers for USA is 3.58 as compared with 3.53 for Asia. Both the US and Asian firms exhibit higher awareness levels as the sample firms were chosen from Global Reporting Initiative (GRI) lists. Firms that conform to GRI are known for their superior awareness and responsibility levels with respect to these issues. But for the mean scores of Environmental drivers were marginally higher at 3.46 for Asia than 3.32 for USA.

For firms in the USA, there were significant differences for the Environmental drivers (p value 0.08) when compared with Asian firms (Table 9.2). This is an important finding, considering the global ramifications of the problem of greenhouse gases, pollution and expensive traditional energy resources. The role of the Environmental drivers could be reflect in the EVA for firms, both in the US and Asia.

ANOVA is then used to explore the significant differences between USA and Asia based on perceived Competitive Advantage. This analysis could be termed as the firms’ ‘internal’ crosscheck of the effects of the drivers in contrast to the ‘objective’ effects as assessed by the Economic Value Added. Table 9.3 shows that there are significant differences between firms in USA and those from Asia with respect to the Societal drivers (p value 0.07) when the sets of drivers are compared with perceived Competitive advantage. For the Asian firms, environmental drivers are significantly more important for Competitive advantage.

**Table 9.3: Comparing Drivers and Competitive advantage**

	Competitive Advantage as assessed by respondents		
	USA	Asia	p value
Societal drivers	3.58	3.73	(0.07)
Environmental drivers	3.00	3.46	- ns -
Stakeholder drivers	3.23	3.53	- ns -

The similar analysis done with the EVA (Table 9.4) indicated the Environmental drivers to be significantly different between US and Asia. This means that within the companies, managers feel that there are no significant difference with respect to Environmental and Stakeholder drivers between US and Asian firms, but there is significant difference between Societal drivers. The higher Societal awareness levels in the US of non-governmental organizations may cause this difference in perception. There are differences between the mean scores between Asian and US firms. The mean scores for Societal, Environmental and Stakeholder drivers are higher for Asian firms. This is an interesting reversal in the trend as seen in Table 8.2, where the mean scores were higher for the US for Societal and Stakeholder drivers. This could reflect that respondents from Asia appreciate the importance of these sets of drivers somewhat more than their US counterparts. At the firm level the interpretation for this is the need to manage resources for these drivers to add to the Competitive Advantage of the firms.

**Table 9.4: Compare Drivers with levels EVA of US firms**

	EVA of firms in USA		
	High Positive EVA	Low Positive EVA	Negative EVA
Societal drivers	4.30 (-ns-)	3.96 (-ns-)	3.78 (0.03)
Environmental drivers	3.64 (-ns-)	3.66 (-ns-)	3.02 (-ns-)
Stakeholder drivers	3.77 (-ns-)	3.88 (-ns-)	3.42 (-ns-)

As the EVA values of the sample firms could be classified into high positive, low positive and negative EVA, ANOVA was then used to explore differences between high positive, low positive and negative EVA for the firms in USA (Table 9.4) and those for Asia (Table 9.5). Table 9.4 shows that the means for high EVA firms in USA are considerably higher than the negative EVA firms. This confirms the link between Societal, Environmental and Stakeholder drivers and the high EVA for international firms.

US firms with negative EVA indicates less impact from Societal drivers. Table 9.4 shows that there is significant difference between high positive and negative EVA (p value 0.03) for the firms in USA with respect to the Societal drivers only. This could be so as the firms with negative EVA are aspiring to move to higher levels of EVA and consider that Societal drivers like ethical business practices with internal and external stakeholders, developmental projects for communities, rights of consumers, and fair trading with suppliers could facilitate improvements in EVA.

**Table 9.5: Compare Drivers with levels of EVA of Asian firms**

	EVA of firms in Asia		
	High Positive EVA	Low Positive EVA	Negative EVA
Societal drivers	4.00 (-ns-)	3.37 (-ns- )	3.82 (-ns-)
Environmental drivers	3.85 (-ns-)	2.88 (0.03)	3.34 (-ns-)
Stakeholder drivers	3.82 (-ns-)	3.06 (-ns- )	3.56 (-ns-)

ANOVA Table 9.5 compares the means of sets of drivers with high, low positive and negative EVA for Asian firms. Asian firms with low EVA is significantly less impact of Environmental drivers. The only significant difference is manifested by low positive and negative EVA Asian firms with respect to Environmental drivers (p value 0.03). This means that the environmental drivers have a great effect on the Asian firms that have low positive EVA or negative EVA. The environmental drivers is the primary route to improve the EVA as they are visible to legislators and institutional agencies.

Further ANOVA analysis (Table 9.6) compared the means of the sets of drivers with the respective sets of high positive, low positive and negative EVA firms of USA and Asia. There are significant differences between high positive EVA companies of USA and Asia (p value 0.01) for Societal drivers. This could be due to differences in the impact of Societal drivers between US and Asia. International companies are collaborating with pressure groups and activists in the US to forge mutual understanding and to disseminate the societal initiatives in an effective manner. The low positive EVA firms (p value 0.09) and the negative EVA firms (p value 0.01) This could be interpreted in terms of the differences in available resources to implement environmental initiatives like life cycle assessment, pollution control and effluent treatment systems and implementing targets for reduction and disposal of wastes.

**Table 9.6: Compare Drivers with respective EVA levels of US and Asian firms**

	EVA of firms			EVA of firms			EVA of firms		
	High Positive USA	High Positive Asia	p value	Low Positive USA	Low Positive Asia	p value	Negative USA	Negative Asia	p value
Societal drivers	4.30	4.00	(0.01)	4.09	3.44	- ns -	3.82	3.82	- ns -
Environmental drivers	3.64	3.85	- ns -	3.66	2.88	(0.09)	3.01	3.33	(0.01)
Stakeholder drivers	3.77	3.82	- ns -	3.89	3.07	- ns -	3.43	3.56	- ns -

For high EVA firms in the US, the Societal drivers are significantly higher. For low EVA firms in the US, Environmental drivers are significantly higher. Also, for negative EVA for Asian firms, the Environmental drivers are significantly more. The mean values also show consistent patterns in terms of difference between the sets of high positive, low positive and negative EVA companies from USA and Asia. For the low EVA firms, all the three sets of drivers scored higher mean values. The societal drivers have a mean of 4.09, the environmental drivers have a mean of 3.66 and stakeholder drivers have a mean score of 3.89 for the USA firms as compared with 3.44 for societal drivers, 2.88 for environmental drivers and 3.07 for stakeholder drivers for the Asian firms (Table 9.6). The trend reverses for negative EVA firms. The Asian firms score higher (or similar) at 3.82, 3.33 and 3.56 as compared to 3.82, 3.01 and 3.43 respectively for the corresponding Societal, Environmental and Stakeholder drivers. This interesting revelation proposes that for the US based companies, if they have low positive EVA, are likely to realize the link between Societal, Environmental and Stakeholder initiatives to firm value. But for negative EVA Asian firms, rate these drivers to have higher impacts on the value of the firm.

ANOVA is applied to compare drivers of competitive advantage as assessed by respondents of US firms with respect to high positive, low positive and negative EVA (Table 9.7). There are no significant differences.

**Table 9.7: Compare Drivers with perceived Competitive Advantage for levels of EVA of US firms**

	Competitive Advantage as assessed by respondents of US firms		
	High Positive	Low Positive	Negative
Societal drivers	3.43 (-ns-)	3.76 (-ns-)	3.58(-ns-)
Environmental drivers	2.68 (-ns-)	3.27(-ns-)	3.03(-ns-)
Stakeholder drivers	2.91(-ns-)	2.63(-ns-)	3.20(-ns-)

The ANOVA extended to Asian firms (Table 9.8). In this case too, there are no significant difference between the sets of drivers and the perceived Competitive advantage of the respondents of the Asian firms.

**Table 9.8: Compare Drivers with perceived Competitive Advantage for levels of EVA of Asian firms**

	Competitive Advantage as assessed by respondents of Asian firms		
	High Positive	Low Positive	Negative
Societal drivers	4.20(-ns-)	3.86(-ns-)	3.75(-ns-)
Environmental drivers	3.68(-ns-)	3.28(-ns-)	3.17(-ns-)
Stakeholder drivers	3.87(-ns-)	3.86(-ns-)	3.75(-ns-)

Table 9.9 compares the means of sets of drivers with Competitive advantage as assessed by respondents with respect to paired sets of corresponding US and Asian firms of high positive, low positive and negative EVA.

**Table 9.9: Compare Drivers with perceived Competitive Advantage for respective EVA levels for US and Asian firms**

	Competitive Advantage as assessed by respondents			Competitive Advantage as assessed by respondents			Competitive Advantage as assessed by respondents		
	High Positive EVA of USA	High Positive EVA Asia	p value	Low Positive USA	Low Positive Asia	p value	Negative USA	Negative Asia	p value
Societal drivers	4.24	3.81	- ns -	4.09	3.31	(0.06)	3.57	3.81	-ns -
Environmental drivers	3.77	3.84	(0.03)	3.89	2.87	- ns -	2.89	3.48	-ns -
Stakeholder drivers	3.76	3.82	- ns -	3.88	3.07	- ns -	3.37	3.56	(0.02)

There is evidence of significant difference between the low positive EVA firms of USA and Asia with respect to Societal drivers (p value 0.06). There is significant difference between high positive EVA firms of USA and Asia with respect to Environmental drivers (p value 0.03). Negative EVA of USA and Asian firms show significant difference with respect to the Stakeholder drivers (p value 0.02). These statistical significances reflects a pattern, where each one of the sets of drivers has significant differences with one category of firms. The Environmental drivers are significantly different for US and Asian firms for the high EVA category. But, the Societal drivers are significantly different for US and Asian firms in low positive EVA group, while the Stakeholder drivers are significantly different for the US and Asian companies in the negative EVA group. The Environmental drivers include high investments in effluent treatment plants, pollution control equipment and research and development costs for life cycle analysis. This high investment area of environmental initiatives is more accessible to high EVA companies in the US than in Asia. The low positive EVA firms are different for US and Asia for the societal drivers. Societal drivers include ethical business practices with internal and external stakeholders, developmental projects for communities, rights of consumers and fair trading with suppliers. These initiatives call for the company's orientation to improve its position. As there is significant difference between the US and Asian firms for the low positive EVA category, the reason could be US firms could select the Societal drivers as their choice

option to improve EVA. For the Stakeholder drivers there is significant difference between US and Asian firms for the Negative EVA firms. The Stakeholder drivers include ethical stakeholder approach at board levels, active response to issues from stakeholders and dialogue with stakeholders. For the Negative EVA firms these issues become most relevant for the companies in the face of pressure groups and activists. The significant difference is explained as the impact of these stakeholders are generally more marked in the US than in Asia.

#### **9.4 Summary of findings**

The mean scores for the Societal and Stakeholder drivers are higher for the USA firms than for the Asian firms with respect to EVA. The scores of Environmental drivers were marginally higher for Asia than for USA. An important finding was that there were significant differences for the Environmental drivers (p value 0.08) when US firms were compared with Asian firms. The problem of greenhouse gases, pollution and expensive traditional energy resources has global consequence in order to achieve sustainability. The role of effective management of the Environmental drivers could reflect in the EVA for firms, both in the US and Asia.

At the 'internal' company level, managers feel that there is significant difference between Societal drivers. There is an interesting reversal in the trend for the drivers where Asian firms had higher scores than their US counterparts for Societal and Stakeholder drivers reflecting higher importance assigned to these sets of drivers.

ANOVA was used to explore differences between high positive, low positive and negative EVA for the firms in USA showed significant difference between high positive and negative EVA (p value 0.03) for the firms in USA for the Societal drivers only. Corresponding analysis for Asian firms revealed significant difference only for low positive and negative EVA Asian firms for Environmental drivers (p value 0.03).

Further ANOVA was used to compare the means of the sets of drivers with the respective sets of high positive, low positive and negative EVA firms of USA and Asia indicated three indicators of significant differences. They include difference between the high positive EVA set (p value 0.01) for Societal drivers, the low positive EVA (p value 0.09) and the negative EVA firms (p value 0.01).

ANOVA for perceived Competitive advantage revealed significant difference between the low positive EVA firms of USA and Asia with respect to Societal drivers (p value 0.06), between high positive EVA firms of USA and Asia with respect to Environmental drivers (p value 0.03) and between Negative EVA of USA and Asia with respect to the Stakeholder drivers (p value 0.02).

Table 9.10 summarizes that Hypotheses 3a, 3b and 4a are supported. Societal drivers are significantly more positively related to Economic Value Added for US firms as compared to Asian firms. Also the Societal drivers are significantly more positively related to perceived Competitive Advantage for US firms than Asian firms.

**Table 9.10: Summary of Hypotheses testing (ANOVA)**

<b>Hypothesis</b>	<b>Particulars</b>	<b>Sig</b>	<b>Results</b>
Hypothesis 3a	For the US firms the Societal drivers are significantly more positively related to Economic Value Added than the international firms from Asia.	(0.17)	<i>Hypothesis supported</i>
Hypothesis 3b	For the US firms the Environmental drivers are significantly more positively related to Economic Value Added than the international firms from Asia.	(0.08)	<i>Hypothesis supported</i>
Hypothesis 3c	For the US firms the Stakeholder drivers are significantly more positively related to Economic Value Added than the international firms from Asia.	- ns -	<i>-not supported-</i>
Hypothesis 4a	For the US firms the Societal drivers are significantly more positively related to the perceived Competitive Advantage than the international firms from Asia.	(0.07)	<i>Hypothesis supported</i>
Hypothesis 4b	For the US firms the Environmental drivers are significantly more positively related to the perceived Competitive Advantage than the international firms from Asia.	- ns -	<i>-not supported-</i>
Hypothesis 4c	For the US firms the Stakeholder drivers are significantly more positively related to the perceived Competitive Advantage than the international firms from Asia.	- ns -	<i>-not supported-</i>

## CHAPTER 10 SENSITIVITY ANALYSIS

In order to establish the validity of the methodology used, it is useful to undertake additional statistical analysis. Validity is the extent to which the methodology accurately represents the concept. Through the sensitivity analysis the appropriateness of the selection of the drivers may be tested. This analysis also assesses whether useful conclusions may be drawn from the previous analysis based on the methodology selected. Essentially, the sensitivity analysis indicates how the results in basic societal, environmental and stakeholder driver model can be apportioned, qualitatively or quantitatively, into principal components. Principal components summarize most of the original drivers to a minimum number of factors. In statistical procedural terms, the total variance of the initial drivers is considered in order to derive factors that contain small proportions of unique variance (Hair, 2006).

### 10.1 Suitability of Factor Analysis

The initial analysis is essentially a quality control approach for the survey that produces a solution using principal components extraction. The suitability of the data for structure detection is tested by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and the Bartlett's test of sphericity. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy statistic (Table 10.1) indicates the proportion of variance in the variables that might be caused by underlying factors.

**Table 10.1: Suitability of Factor Analysis**

Kaiser-Meyer-Olkin measure of sampling adequacy:	0.629
Bartlett's test of sphericity:	
Approximate Chi Square:	511.855
Degree of freedom:	171
Significance:	0.000

High values (close to 1.0) generally indicate that a factor analysis is useful for the present data. If the value is less than 0.50, the results of the factor analysis won't be very useful. Table 10.2 shows the Kaiser-Meyer-Olkin measure of Sampling Adequacy has a value of 0.629, indicating that factor analysis would be suitable.

The Bartlett's test of sphericity tests (Table 10.1) whether the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be suitable with the data. In the present case, significance of 0.000 confirms the usefulness of factor analysis.

### 10.2 Two stage Factor Analysis

Factor analysis is performed with two bases: (a) the concept of Economic Value Added and (b) the perceived Competitive Advantage of the respondents. Both the analyses try to bring out the principal underlying factors. EVA is essentially an 'objective' evaluator of the

firm's competitive advantage. The 'internal' viewpoint comes from the perception of Competitive advantage of the respondents.

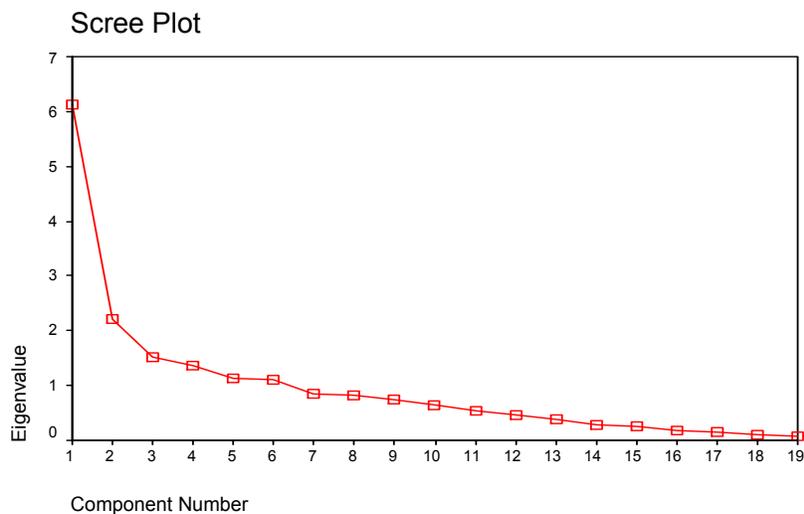
### 10.3 Factor Analysis for drivers

In order to apply multiple regression in the sensitivity analysis, factor analysis was applied to condense the original 19 items into key underlying factors, through principal components analysis with varimax rotation. The varimax rotation clarifies the structure of the chosen factors by maximizing the variance between each of the factors. It adjusts the weights given to each element on each factor.

Only the eigenvalues greater than 1 are extracted. The eigenvalue is the amount of variance in the original variables accounted for by each factor or component. Only first six principal components are extracted. They explain about 71 percent of the variability of the factors, thereby considerably reducing the complexity of the data set. Communalities indicate the amount of variance in each variable that is accounted for. The initial communalities (always equal to 1.0) are estimates of the variance in each variable accounted for by all components or factors.

The scree plot (Figure 10.1) determines the optimal number of components. The eigenvalue of each component in the initial solution is plotted. Generally, the components on the steep slope are extracted. The components on the shallow slope contribute little to the solution. The last big drop occurs between the sixth and seventh components, so the first six components are chosen.

**Figure 10.1: The Scree plot to select principal components**



As eigenvalues greater than 1 are extracted, only the first six principal components form the extracted solution.

Table 10.2 shows the six principal factors with factor loadings. For instance, factor 1 represents written environmental policy (item 12 of the questionnaire) with a factor loading (f.l.) of 0.840; energy conservation (item 15) (f.l.: 0.686) and qualitative measures for societal & environment (item 19) (f.l.: 0.892. Other factors 2,3,4,5, and six and their representative components are shown in Table 10.2.

**Table 10.2: Rotated factor loadings (for EVA based Factor Analysis)**

Item (numbers in brackets indicates questionnaire item numbers)	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
<b>The Societal (S) drivers:</b>						
ethical business practices with stakeholders (1)			0.606			
employee ethical behavior (2)			0.617			
developmental projects for communities (7)		0.714				
rights of consumers (8)				0.792		
fair trade with suppliers (10)						
promotes relations with shareholders (9)				0.770		
<b>The Environmental (E) drivers:</b>						
specific commitment to the environment (11)		0.717				
written environmental policy (12)	0.840					
optimal use of resources (13)						0.716
targets for resource optimization (14)		0.522				
energy conservation (15)	0.686					
life cycle analysis (16)					0.572	
limits toxic chemical use (17)						0.892
eliminates unsustainable products (18)					0.924	
<b>The Stakeholder (SH) drivers:</b>						
ethical stakeholder approach board levels (3)			0.849			
responds to issues from stakeholders (4)		0.647				
engages in dialogue with stakeholders (5)		0.523				
mutual societal and environmental issues (6)						
qualitative measures Societal & Environment (19)	0.892					

The resulting six component scores are representative of, and can be used in place of, the nineteen original variables. .

The rotation maintains the cumulative percentage of variation explained by the extracted components, but that variation is now spread more evenly over the components. Table 10.2 presents results of factor analysis, using ‘varimax’ rotation of the items. The rotated factor loadings indicate that the items load on each of the six factors, i.e., the relative importance of each item on the different factors. Each factor is represented by a column and each of the 19 items as a row. The numeric value in each cell indicates the strength of the item’s ‘loading’ onto the factor. The more an item loads onto a single factor, the better that factor represents the item’s perspective. The rotation sequence assigns participants to factors.

Table 10.2 columns indicate the six principal factors. But most of the cells in the matrix have low factor loadings for some of the items. For example, factor 1 has only 3 items that have high loadings, qualitative measures Societal & Environment (0.892), written environmental policy (0.840) and energy conservation (0.686). All the remaining cells have low factor loadings.

Table 10.3 represents the details of the six principal factors. Factor 1 is Policy impact / Compliance and represents written policy (item 12) with a factor loading of 0.840, energy conservation (item 15) with factor loading 0.686 and qualitative measures (item 19) with the factor loading 0.892. Factor 2 is termed as Stakeholder engagement and represents the stakeholder issues like development projects, pollution treatment, specific stakeholder targets, responses to stakeholder concerns and dialogue with stakeholders. The other factors are Ethical behavior (factor 3), Stakeholder rights (factor 4), Sustainability (factor 5) and Environmental impact (factor 6). The respective items represented by the factors and factor loadings are summarized in Table 10.3.

**Table 10.3: Factor analysis of Drivers for EVA**

<b>Factor 1: Policy impact/ Compliance</b>			
1	Written policy (12)	0.840	(item 12)
2	Energy conservation (15)	0.686	(item 15)
3	Qualitative measures (19)	0.892	(item 19)
<b>Factor 2: Stakeholder Engagement</b>			
1	Development projects (7)	0.714	(item 7)
2	Pollution treatment	0.717	(item 11)
3	Specific stakeholder targets	0.522	(item 14)
4	Responds to stakeholders	0.647	(item 4)
5	Dialogue with stakeholders (5)	0.523	(item 5)
<b>Factor 3: Ethical behavior</b>			
1	Ethical practice	0.606	(item 1)
2	High ethical standards	0.617	(item 2)
3	Ethical approach to Societal and Environmental issues	0.849	(item 3)
<b>Factor 4: Stakeholder rights</b>			
1	Rights of consumers	0.792	(item 8)
2	Investor relations	0.720	(item 9)
<b>Factor 5: Sustainability</b>			
1	Life Cycle Analysis	0.572	(item 16)
2	Eliminates Unsustainable products	0.924	(item 18)
<b>Factor 6: Environmental impact</b>			
1	Commitment to sustainability	0.716	(item 13)
2	Limits toxic wastes	0.892	(item 17)

#### 10.4 What the key Factors represent

The first factor can be designated as Policy impact/ Compliance. This mainly refers to management policies, and regulatory compliance. This factor is characterized by high agreement with the following items: written environmental policy, initiatives for energy conservation and qualitative measures for Societal and Environmental compliance. Factor 2 describes company's stakeholder engagement level. It has high factor loadings with stakeholder interests like development projects for the community, pollution treatment, specific targets for stakeholders, responds to stakeholder issues and dialogue with stakeholders. Likewise table 10.3 lists the remaining factor 3, Ethical behavior; factor 4, Stakeholder rights; factor 5, Sustainability and factor 6, Environmental impact and their respective representations.

Table 10.4 lists these six factors that emerged as new variables from Factor Analysis and represents the entire set of nineteen items of the questionnaire. The means score of the new factor variables are calculated by taking the average of the representative items of each factor. Noticeably, these new factor variables provide a number of possible behaviors of companies towards the societal, environmental and stakeholder drivers. They could be integrated into strategy of the firm by adopting appropriate initiatives that would lead to the sustainability orientation of the firm.

**Table 10.4: New Variables that emerged from Factor analysis for EVA**

Factor 1: Policy impact/ Compliance	Written policy Energy conservation Qualitative measures	3.70
Factor 2: Stakeholder engagement	Development projects Pollution treatment Specific stakeholder targets Responds to stakeholders Dialogue with stakeholders	3.52
Factor 3: Ethical behavior	Ethical practice High ethical standards Ethical approach to Societal and Environmental issues	3.77
Factor 4: Stakeholder rights	Rights of consumers Investor relations	4.01
Factor 5: Sustainability	Life Cycle Analysis Eliminates Unsustainable products	2.84
Factor 6: Environmental impact	Commitment to sustainability Limits toxic wastes	3.62

### 10.5 Analysis of the principal factors

The mean score for the principal factors show a wide variation with Stakeholder rights (factor 4) being the highest with 4.01 and Sustainability (factor 5) has the lowest at 2.84. The other key factors are between the mean score of 3.77 for Ethical behavior (factor 3), 3.70 for Policy impact/Compliance (factor 1), 3.62 for Environmental compliance (factor 6) and 3.52 for Stakeholder engagement (factor 2). The highest mean scores for Stakeholder rights imply the relative importance of the underlying items, viz, rights of consumers and investor relations. Among the societal, environmental and stakeholder issues, the elements that affect the company most visibly are their consumers and the investors. Firms try to take adequate care for consumer rights. The role of investors affects firms' expansion and modernization plans. Hence both these elements combine under the factor Stakeholder rights to have the highest mean score. On the other hand, Sustainability (factor 5) has the lowest mean score. Sustainability represents the two items life cycle analysis and eliminates unsustainable products. Life cycle analysis is a systematic technique for evaluating the potential environmental benefits and impacts with respect to the use of resources, human health and ecological consequences associated with a product or function throughout its entire life from extraction of raw materials to its eventual disposal and assimilation into the environment. Life Cycle Analysis and the elimination of unsustainable products require substantial investments and redesign of products and processes. It requires extensive research and product redesign. For this reason factor 5 has a relatively low score.

### 10.6 Factor Analysis of perceived Competitive Advantage

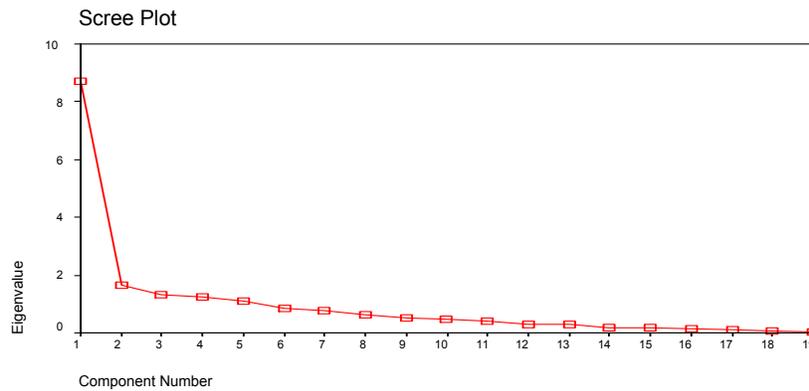
Similarly, factor analysis was performed for the perceived Competitive Advantage variables. The data structure suitability, tested by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy, shows the value of 0.769 (Table 10.5) and the Bartlett's test of sphericity indicate significance of 0.000 confirms the usefulness of factor analysis.

**Table 10.5: Reliability analysis and Tests for suitability of Factor Analysis for Perceived Competitive Advantage**

Kaiser-Meyer-Olkin measure of sampling adequacy:	0.769
Bartlett's test of sphericity:	
Approximate Chi Square:	736.312
Degree of freedom:	171
Significance:	0.000

Compared to the six principal components for the factor analysis for EVA (Table 10.2), in this case, the factor analysis for perceived Competitive advantage (Table 10.6) condenses to only five principal components that have eigenvalues greater than one. They explain about 74 percent of the variability in the factors.

**Figure 10.2: The Scree plot to select principal components (perceived Competitive Advantage)**



The scree plot (Figure 10.2) that plots the eigenvalue of each component has a rapidly falling slope for the first five items. As the components on the shallow slope contribute little to the solution, therefore the first five components are chosen.

Table 10.6 presents the rotated factor loadings for perceived Competitive advantage. Five factors are represented by each column instead of six (Table 10.2). There are inherent implications for the reduction in the number of principal factors in case of factor analysis for perceived Competitive advantage as compared to the factor analysis for EVA. Fewer factors yield sufficient dispersion to identify clear, non-overlapping key factors. The more number of factors are present, the more fragmented the data becomes. The fewer factors facilitate the assigning of the factors. As the perceived Competitive advantage factor analysis has fewer factors signify that the items could be closely aligned to the key factors. While for EVA based factor analysis, more principal factors are necessary to represent the drivers.

### 10.7 What the key Factors represent

Table 10.6 shows the six principal factors with factor loadings. Factor 1 is Policy impact / Compliance and represents eight items mainly related to the environmental drivers. This

factor is similar to factor 1 for the EVA based factor analysis (Table 10.3) but has five more items. This is due to the firm-based respondents' knowledge that most of the items on environment influences competitive advantage. Factor 2 is sustainability and represents mutual societal and environmental issues, ethical stakeholder approach board levels and life cycle analysis. The other factors are ethical behavior (factor 3) and stakeholder rights (factor 4). Conspicuously, consumer orientation (factor 5) is representative of only a single item, rights of consumers with a very high factor loading of 0.905. The more a representative item loads cleanly or disproportionately onto a single factor, the better that factor represents the items perspective. Whereas, in the EVA based factor analysis (Table 10.3), stakeholder rights (factor 4) represented rights of consumers and investor relations, in the perceived Competitive advantage based factor analysis, the high factor loading for the rights of consumers merited a separate factor for this aspect. The 'internal' firm respondents' rate the rights of consumers to be a significant drivers for Competitive advantage.

Table 10.6 also has cells that have low factor loadings. These gaps indicate priority areas with regard to the societal, environmental and stakeholder drivers that would augment Competitive advantage. Firms need to reassess the gaps and review corporate initiatives for the items that have drawn low factor loadings. The Policy impact / Compliance (factor 1) and Sustainability (factor 2) has cell gaps for all societal items. The gaps imply that factors 1 and 2 are not adequately driven by the societal drivers to influence Competitive advantage. Consequently, the firms need to review the reasons for low loadings of the items. Factor 3 (Ethical behavior), factor 4 (Stakeholder rights) and factor 5 (Consumer orientation) have gaps for all items in the Environmental and Stakeholder drivers. All these factors are quite incomplete without the representation from important environmental and stakeholder driver elements.

**Table 10.6: Rotated factor loadings (perceived Competitive advantage)**

Item (numbers in brackets indicates questionnaire item numbers)	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
<b>The Societal (S) drivers:</b>					
ethical business practices with stakeholders (1)			0.697		
employee ethical behavior (2)			0.773		
developmental projects for communities (7)					
rights of consumers (8)					0.905
promotes relations with shareholders (9)				0.820	
fair trade with suppliers (10)				0.499	
<b>The Environmental (E) drivers:</b>					
specific commitment to the environment (11)	0.693				
written environmental policy (12)	0.861				
optimal use of resources (13)	0.820				
targets for resource optimization (14)	0.761				
energy conservation (15)	0.720				
life cycle analysis (16)		0.636			
limits toxic chemical use (17)	0.780				
eliminates unsustainable products (18)					
<b>The Stakeholder (SH) drivers:</b>					
ethical stakeholder approach board levels (3)		0.643			
responds to issues from stakeholders (4)	0.699				
engages in dialogue with stakeholders (5)					
mutual societal and environmental issues (6)		0.691			
qualitative measures Societal & Environment (19)	0.779				

Comparing the EVA based Factor Analysis (Table 10.2) and Factor Analysis based perceived Competitive advantage (Table 10.6) leads to the comparison of the gaps. For the former, the high factor loaded items are spread all over the table. It is evident that EVA led Factor analysis did choose representative items for its principal factors from all the three sets of drivers, while the factor analysis based on perceived Competitive advantage comprise of a majority of key factors that ignore representations from two important sets of drivers.

Furthermore, there are more gaps in both the factor analysis charts (Table 10.2 and 10.6) for the environmental drivers. The future research could take up this issue to examine the modes by which the environmental aspects can become powerful drivers of the key factors to impact on EVA as well as Competitive advantage for international firms.

**Table 10.7: Comparison of Factors from Factor Analysis for EVA and perceived Competitive Advantage**

<b>Factor Analysis for Economic Value Added</b>		
Factor 1 <b>Policy impact/ Compliance</b>	- Written policy ✓ - Energy conservation ✓ - Qualitative measures ✓	3.70
Factor 2: <b>Stakeholder engagement</b>	- Development projects - Pollution treatment - Specific stakeholder targets - Responds to stakeholders - Dialogue with stakeholders	3.52
Factor 3: <b>Ethical behavior</b>	- Ethical practice ✓ - High ethical standards - Ethical approach to Societal and Environmental issues ✓	3.77
Factor 4: <b>Stakeholder rights</b>	- Rights of consumers - Investor relations	4.01
Factor 5: <b>Sustainability</b>	- Life Cycle Analysis - Eliminates Unsustainable products	2.84
Factor 6: <b>Environmental impact</b>	- Commitment to sustainability - Limits toxic wastes	3.62

The basic purpose of a two stage Factor analysis is to explore the key factors when examined ‘objectively’ through EVA and ‘internally’ by perceived Competitive Advantage. Table 10.7 compares the key factors and the underlying components that they represent. The highest mean score of 4.27 is that of factor 5 (Consumer rights) for the factor analysis based on perceived Competitive advantage. This is closely related to the Stakeholder set of drivers. Thus, Competitive advantage is perceived to be driven to a greater extent by Stakeholder drivers like consumer rights.

**Table 10.8: Comparison of Factors from perceived Competitive Advantage**

<b>Factor Analysis for perceived Competitive Advantage</b>		
<b>Factor 1 Policy impact/ Compliance</b>	<ul style="list-style-type: none"> <li>- Written policy ✓</li> <li>- Optimal use of resources</li> <li>- Limits toxic chemicals</li> <li>- Qualitative measures ✓</li> <li>- Resource optimization targets</li> <li>- Energy conservation ✓</li> <li>- Responds to stakeholders issues</li> <li>- Commitment for the environment</li> </ul>	3.30
<b>Factor 2: Sustainabili ty</b>	<ul style="list-style-type: none"> <li>- Societal and environmental issues</li> <li>- Ethical approach at board levels</li> <li>- Life cycle analysis</li> </ul>	3.27
<b>Factor 3: Ethical behavior</b>	<ul style="list-style-type: none"> <li>- Ethical practice ✓</li> <li>- Ethical approach to Societal and Environmental issues ✓</li> </ul>	3.65
<b>Factor 4: Stakeholder rights</b>	<ul style="list-style-type: none"> <li>- Relations with shareholders</li> <li>- Fair trade with suppliers</li> </ul>	3.60
<b>Factor 5: Consumer Rights</b>	<ul style="list-style-type: none"> <li>- Rights of consumers</li> </ul>	4.27

Factor 1 in both the analyses represents the Environment related items which is termed as Policy impact/ Compliance. It may be noted that all the items represented by Factor 1 for the EVA based Factor analysis is present in the perceived Competitive Advantage based Factor analysis (tick marked in Table 10.8). But the latter comprise five more items, viz., optimal use of resources; limits toxic chemicals; resource optimization targets; responds to stakeholder issues and commitment for the environment. Implication of this is that external assessor picks up only a few elements among a port-folio of environmental drivers that affect EVA. But, the respondents realize the importance of eight drivers which could drive Competitive advantage.

Two representative items of Factor 3 for the Factor analysis for perceived Competitive Advantage are included in the corresponding Factor 3 for the Factor analysis for EVA. In addition to the common items, Factor 3 of the Factor analysis for EVA includes the additional item of high ethical standards. Interestingly, the ‘external’ assessor EVA values Ethical Standards (Factor 2) with more component items (three in number) than the same for the ‘internal’ perceived Competitive Advantage (two items).

For Factor 2 in case of EVA Factor Analysis, the representative items are completely different from the Factor 2 for Factor Analysis for perceived Competitive Advantage. The same may be said for Factors 4, 5 and 6. Their component perspective based items are entirely different from Factors 2, 4 and 5. This reiterates the fact that ‘objective’ EVA views of a firms is quite different from the ‘internal’ perceived Competitive advantage of the firm as they are based on different factor structures. This discordance needs to be reduced. Future research could undertake the task to converge the different component

items, so that the 'internal' drivers are aligned with the 'external' ones. This harmonized framework would well and truly drive the firms to better performance levels.

### **10.8 Regression for new constructs**

Table 10.9 presents the results of the regression analysis done with the new variables that emerged from the EVA based Factor analysis. The independent variables were the principal factors and EVA as the dependent variable. In order to ascertain region specific relationships, separate regressions were also conducted for the US company sample (model 1) and the Asian company sample (model 2). Regression was also conducted for the total sample using a location control variable (model 3). In order to examine the effect of gross domestic product (GDP) of the country where the firm is located, further regression was done (model 4).

With respect to country differences based on gross domestic product (model 4), beta value - 0.400 (0.78) is interesting. The negative sign for the beta implies that firms located in lower GDP countries could generate higher EVA based on societal, environmental and stakeholder drivers. Generally higher levels of wealth would reflect relatively greater resources that could be re-invested for societal, environmental and stakeholder projects. This conforms to earlier research findings that India, which is relatively poor and has the higher levels of CSR, and Singapore, while is the richer has only median CSR ratings Chambers, 2003).

Regression analysis for model 2, show significant influence on EVA for Asian firms (R square 0.389 at p value 0.07). The two key factors, ethical behavior (beta 0.612 at p 0.01) and sustainability (beta minus 0.513 at p 0.05) show statistical significance. The inference for this is that when regression is performed on the key factors, influence of two of the factors show up, which were not evident in the broad driver-based regression.

The Ethical behavior factor includes ethical practice, high ethical standards and ethical approach to societal and environmental issues.

**Table 10.9 Regression with Key factors (EVA based factor analysis) and EVA**

Setup 1: USA Dependent variable: EVA, Independent Variables: new Key Factors		
Factor 1: Policy Impact / Compliance	0.229	(-ns-)
Factor 2: Stakeholder Engagement	<i>- excluded in Regression -</i>	
Factor 3: Ethical behavior	0.445	(0.03)
Factor 4: Stakeholder rights	0.020	(-ns-)
Factor 5: Sustainability	-0.388	(0.06)
Factor 6: Environment impact	0.141	(-ns-)
R square	0.287	(-ns-)
Setup 2: Asia Dependent variable: EVA, Independent Variables: new Key Factors		
Factor 1: Policy Impact / Compliance	0.145	(-ns-)
Factor 2: Stakeholder Engagement	<i>- excluded in Regression -</i>	
Factor 3: Ethical behavior	0.612	(0.01)
Factor 4: Stakeholder rights	0.175	(-ns-)
Factor 5: Sustainability	-0.513	(0.05)
Factor 6: Environment impact	0.144	(-ns-)
R square	0.389	(0.07)
Setup 3: Combined USA and Asia sample Dependent variable EVA, with Location variable US 1, Asia 0		
Factor 1: Policy Impact / Compliance	0.181	(-ns-)
Factor 2: Stakeholder Engagement	0.042	(-ns-)
Factor 3: Ethical behavior	0.401	(0.01)
Factor 4: Stakeholder rights	0.061	(-ns-)
Factor 5: Sustainability	-0.376	(0.02)
Factor 6: Environment impact	0.078	(-ns-)
Location	-0.064	(-ns-)
R square	0.204	(0.07)
Setup 4: Combined USA and Asia sample Dependent variable EVA, with Control variables: Gross Domestic Product and Location variable (USA = 1, Asia = 0).		
Factor 1: Policy Impact / Compliance	0.064	(-ns-)
Factor 2: Stakeholder Engagement	0.059	(-ns-)
Factor 3: Ethical behavior	0.230	(-ns-)
Factor 4: Stakeholder rights	0.143	(-ns-)
Factor 5: Sustainability	-0.098	(-ns-)
Factor 6: Environment impact	0.064	(-ns-)
Location	0.337	(-ns-)
GDP	-0.400	(-ns-)
R square	0.119	(-ns-)

Surprisingly, sustainability has a negative influence on EVA. The Sustainability factor comprises of life cycle analysis and the elimination of unsustainable products. Both the aspects involve large investments in research and development and require redesign of the product. The benefits of sustainability practices is evident in the long term, its impact on EVA could be negative in the short term. Prior research conforms this finding. It was found that financial performance was significant and negatively related to corporate sustainable development (Bansal, 2004).

None of the other models exhibit any statistical significance. In contrast to the regression of the drivers with respect to EVA (Table 8.1), where there was no statistical significance (R square 0.057, p value not significant), the present regression of the principal factors does exhibit a significant influence on EVA.

Table 10.10 shows the results of the regression with key factors (based on perceived Competitive Advantage factor analysis) and perceived Competitive Advantage. The regression has four models similar to the earlier analysis in Table 10.15. Regression setup 8 shows the Combined USA and Asia sample, with Competitive Advantage (CA) as dependent variable, with control variables, Gross Domestic Product and location variable (USA = 1, Asia = 0). 47 percent of the perceived Competitive advantage is explained by the independent variables (R square 0.472 at p value 0.00). This indicates that for the combined sample from USA and Asia, the principal factors influence the Competitive advantage of firms. This influence increases by a couple of percentage points when the Regression of sets of drivers (Table 8.2) was replaced by principal factors (Table 10.10). This establishes the robustness of the methodology, and justifies the appropriateness of the selection of the drivers. Among the significant principal drivers were factor 4, stakeholder rights (beta 0.342 at p value 0.01) and factor 5, consumer rights (beta 0.275 at p value 0.08). Though the regression with EVA as dependent variable did not have any significant factors, the regression with perceived Competitive advantage as dependent variable has two significant factors that influence competitive advantage. The reason for this is that the effects of stakeholder rights and consumer are more visible to the respondents. There is a need for increased efforts at the corporate level to disseminate the influence of these factors to the determinants of EVA.

Regression setup 7 of Table 10.11 is for the regression of combined USA and Asia sample for the dependent variable perceived Competitive advantage along with control on the location variable. This shows statistical significance that explains 47 percent of perceived Competitive advantage (R square 0.466 at p value 0.00). Key factors like Stakeholder rights (factor 4) has beta of 0.312 at p value 0.01 and Consumer rights (factor 5) with a beta of 0.239 at p value 0.04. In the previous regression for driver sets (Table 8.4), R square was not statistically significant. This shows that sensitivity analysis has been able to uncover the some significant influence of the principal factors that were 'dormant' in the broad analysis of the driver sets. While increase in stakeholder rights represented by rights of consumers and fair trade with suppliers increase, the resultant influence on Competitive advantage also increases. An example of this is evident from Levi's launch of 100 percent organic cotton jeans for Fall 2006 being influenced by consumers demands and collaboration with supplier (CSRwire, 2006).

**Table 10.10 Regression with Key factors and perceived Competitive Advantage**

Setup 5: USA Dependent variable: perceived Competitive advantage (CA)	
Factor 1: Policy Impact / Compliance	- 0.093 (-ns-)
Factor 2: Sustainability	0.233 (0.05)
Factor 3: Ethical behavior	0.451 (0.00)
Factor 4: Stakeholder rights	0.481 (0.00)
Factor 5: Consumer rights	0.234 (0.02)
R square	0.933 (0.00)
Setup 6: Asia Dependent variable: perceived Competitive advantage	
Factor 1: Policy Impact / Compliance	- 0.223 (-ns-)
Factor 2: Sustainability	- 0.346 (-ns-)
Factor 3: Ethical behavior	- 0.051 (-ns-)
Factor 4: Stakeholder rights	0.420 (-ns-)
Factor 5: Consumer rights	0.207 (-ns-)
R square	0.261 (-ns-)
Setup 7: Combined USA and Asia sample Dependent variable CA, with Location variable US 1, Asia 0	
Factor 1: Policy Impact / Compliance	0.125 (-ns-)
Factor 2: Sustainability	0.095 (-ns-)
Factor 3: Ethical behavior	0.176 (-ns-)
Factor 4: Stakeholder rights	0.312 (0.01)
Factor 5: Consumer rights	0.239 (0.04)
Location	- 0.151 (-ns-)
R square	0.466 (0.00)
Setup 8: Combined USA and Asia sample Dependent variable CA, with Control variables: Gross Domestic Product and Location variable (USA = 1, Asia = 0).	
Factor 1: Policy Impact / Compliance	0.132 (-ns-)
Factor 2: Sustainability	0.094 (-ns-)
Factor 3: Ethical behavior	0.159 (-ns-)
Factor 4: Stakeholder rights	0.342 (0.01)
Factor 5: Consumer rights	0.235 (0.08)
Location	- 0.982 (-ns-)
GDP	0.842 (-ns-)
R square	0.472 (0.00)

## 10.9 ANOVA for new variables and EVA

ANOVA was performed with two sets of key new variables that emerged from the two factor analyses based on EVA and perceived Competitive Advantage. ANOVA was applied to examine significant differences between international firms in USA and Asia with respect to EVA (Table 10.12), high positive, low positive and negative EVA for firms in USA (Table 10.13) and for the same sets of EVA levels for firms in Asia (Table 10.14). The aspects of normality, homogeneity of variance and interactions were assumed in order to confirm the suitability of the data for ANOVA Analysis.

**Table 10.12: Comparing Factors and EVA**

	EVA		
	USA	Asia	p value
Factor 1: Policy Impact/Compliance	3.86	3.67	(-ns-)
Factor 2: Stakeholder Engagement	3.46	3.60	(-ns-)
Factor 3: Ethical behavior	3.93	3.64	(-ns-)
Factor 4: Stakeholder rights	4.18	3.76	(-ns-)
Factor 5: Sustainability	3.01	2.68	(-ns-)
Factor 6: Environmental impact	3.45	3.68	(-ns-)

Table 10.12 shows that both for US and Asian firms the score levels are moderate. In contrast to Table 9.1, the comparison of factors (based on EVA) with Economic Value Added (Table 10.13), yield no significant differences between US and Asian firms. The Environmental drivers were significantly different in the US as compared to Asia with a p value of 0.08 (Table 9.1). But when the new key factors were formed after factor analysis based on EVA, the constituent items under Environmental drivers were spread among the six principal factors. This might have caused a ‘diffusion’ of the environmental drivers that resulted in lack of significant difference.

**Table 10.13: Comparing Factors and perceived Competitive Advantage**

	Perceived Competitive Advantage		
	USA	Asia	p value
Factor 1: Policy Impact/Compliance	3.09	3.54	(-ns-)
Factor 2: Sustainability	3.20	3.41	(0.03)
Factor 3: Ethical behavior	3.52	3.87	(-ns-)
Factor 4: Stakeholder rights	3.32	3.84	(-ns-)
Factor 5: Consumer rights	4.36	4.54	(-ns-)

Table 10.13 compares factors (based on Competitive Advantage) with perceived Competitive Advantage, shows that mean scores are higher for each of the factors for the Asia based firms than the US firms. This replicates the trend shown by earlier ANOVA analysis (Table 9.2) where the broad sets of drivers were analyzed for significant differences. This further confirms the Hypothesis 1 that the drivers (now represented by new factor variables) were significantly different from that for the Asian firms with respect to EVA. Among the five principal factors considered, analyses revealed significant differences in only one, i.e., Sustainability (p value 0.03). Sustainability factor include expensive Life Cycle Analysis and discontinuance of unsustainable products. The marked difference in research in USA as compared with Asia causes this significant difference.

While a number of comparisons were performed between levels of EVA among USA and Asia, as well as between corresponding levels of EVA between the regions, only those cases showing statistically significant differences have been analyzed.

The next stage of ANOVA looked for significant differences between the principal factors and levels of EVA, high positive, low positive and negative, for firms in Asia (Table 10.6). The corresponding ANOVA for USA did not show any significant difference and hence is not depicted here.

**Table 10.14: Comparing the principal factors with levels EVA of Asian firms**

	EVA of firms in Asia			p value		
	High Positive	Low Positive	Negative	between Hi Pos and Lo Pos	between Lo Pos and Negative	between Hi Pos and Negative
Factor 1: Policy Impact/Compliance	3.18	4.25	3.73	(0.06)	(-ns-)	(-ns-)
Factor 2: Stakeholder Engagement	3.80	3.16	3.70	(0.06)	(0.06)	(-ns-)
Factor 3: Ethical behavior	4.03	3.27	3.46	(-ns-)	(0.03)	(-ns-)
Factor 4: Stakeholder rights	3.66	3.75	3.85	(0.08)	(-ns-)	(-ns-)
Factor 5: Sustainability	3.11	2.41	2.50	(-ns-)	(-ns-)	(0.00)
Factor 6: Environmental impact	3.83	3.33	3.75	(-ns-)	(0.06)	(-ns-)

A number of significant differences are evident between high positive and low positive EVA for the Policy impact/Compliance factor (p value 0.06), Stakeholder engagement factor (p value 0.06) and Stakeholder rights factor (p value 0.08). Reason for these differences for firms in Asia is sought from the difference in levels of EVA. Firms with high EVA would like to maintain and consolidate their position. But low EVA firms aspire to aim for higher EVA. Among the six key factors, Policy impact/Compliance, Stakeholder engagement and Stakeholder rights involve operational level initiatives. High EVA companies add value at all levels of their functions due to streamlined operations. It becomes easier for high EVA firms to draw specific action items on the three factor items.

There are further significant differences with regard to Stakeholder engagement (p value 0.06) and Ethical behavior (p value 0.03) for low positive and negative EVA. Negative EVA firms strive to enter the positive threshold. Company derives value from intangibles like image and reputation. Engaging with stakeholders and ethical behavior plays a stellar role in building reputation. It is likely that these factors are better evidenced in low positive EVA firms as they already are in the positive zone.

The next stage proceeds to compare the respective sets of EVA levels between US and Asia (Table 10.15). This analysis would help to identify in case there are significant differences between the corresponding EVA levels of firms for US and Asia.

**Table 10.15: Comparing principal factors (EVA based) with respective EVA levels of US and Asian firms:**

	EVA of firms			EVA of firms			EVA of firms		
	High Positive EVA of USA	High Positive EVA Asia	p value	Low Positive USA	Low Positive Asia	p value	Negative USA	Negative Asia	p value
Factor 1: Policy Impact/Compliance	4.14	4.26	(-ns-)	3.95	2.83	(0.05)	3.70	3.73	(0.08)
Factor 2: Stakeholder Engagement	3.45	3.80	(-ns-)	3.74	3.16	(-ns-)	3.33	3.70	(-ns-)
Factor 3: Ethical behavior	4.23	4.03	(-ns-)	4.19	3.27	(-ns-)	3.68	3.50	(-ns-)
Factor 4: Stakeholder rights	4.57	3.66	(-ns-)	4.28	3.75	(-ns-)	3.96	3.85	(-ns-)
Factor 5: Sustainability	3.07	3.11	(-ns-)	2.92	2.41	(-ns-)	3.03	2.45	(-ns-)
Factor 6: Environmental impact	3.78	3.83	(-ns-)	3.85	3.33	(-ns-)	3.12	3.75	(-ns-)

Factor 1 that represents Policy impact/Compliance is significantly different between the low positive set of firms (p value 0.05) and negative EVA set of firms (p value 0.08) of USA and Asia. The Policy impact/Compliance factor represents written policy, energy conservation and qualitative measures. Noticeably the difference exists between the low positive and the negative EVA set of firms only. There are difference in regulatory and compliance standards in US and Asia. The implementation levels are similar for high positive EVA, but are different for the low positive and negative EVA firms.

Comparison of principal factors based on perceived Competitive Advantage (CA) with respective EVA levels of US and Asian firms show no statistical difference and are not analyzed.

### 10.10 Summary of ANOVA for new factors

The factor analysis based on EVA produced six new key factors. Factor 1 representing ‘Policy impact/ Compliance’ comprising written policy, energy conservation and qualitative measures. Factor 2 denoted ‘stakeholder engagement’ and constituted development projects, pollution treatment, specific stakeholder targets, response to stakeholders and dialogue with stakeholders. Factor 3 represented as ‘ethical behavior’ and included ethical practice, high ethical standards and ethical approach to societal and environmental issues. Factor 4 represented ‘Stakeholder rights’ comprising rights of consumers and investor relations. Factor 5 was named as ‘Sustainability’ to include life cycle analysis and eliminates unsustainable products. Factor 6 represented ‘Environmental impact’ and included commitment to sustainability and limits toxic wastes.

The factor analysis based on perceived Competitive Advantage had five principal factors. Four of the factors were common for both the factor analysis. The perception of respondents with regard to Competitive Advantage largely matches the factors affecting EVA.

ANOVA was applied to the new variables. The mean scores were higher for each of the factors for the USA based firms than the Asian firms, except for Factor 2 (Stakeholder Engagement) and Factor 6 (Environmental Impact). This replicated the trend shown by earlier ANOVA analysis (Table 8.2) and confirmed that the drivers (now represented by new factor variables) were significantly different from that for the Asian firms with respect to EVA.

None of the new factors showed significant differences with respect to EVA for the USA based firms. For the Asian firms, Factor 1, Policy Impact/Compliance showed significant difference (p value 0.00).

Only the Factor 4 that represented 'Stakeholder rights' showed significant difference between high positive and negative EVA for the USA based firms.

The comparison of means between the principal factors and high positive, low positive and negative EVA of Asian firms showed a number of significant differences. There was significant difference for factor 1, 'Policy Impact / Compliance' between high positive and low positive EVA (p value 0.06). In effect, the inference from this is that the practice of meeting compliance and impact of environmental aspects can create value through the systematic management in high EVA firms more than low EVA firms. Factor 2, 'Stakeholder engagement' too has significant difference between high positive and low positive EVA (p value 0.06). This means that companies with high positive EVA are focused on their triple bottom line of economic profitability, social equity and respect for the stakeholders. The same factor 2, 'Stakeholder engagement' is also significantly different between low positive and negative EVA (p value 0.06). This difference can be explained from the supportive evidence from prior research (Zadek, 1998). The 'traditional' type of stakeholder engagement which is limited to one or two stakeholder groups are in firms with negative EVA. Low positive EVA firms adopt the contemporary approach using ethical accounting statement, where the organization states a code of values, followed by statements explaining these values. A series of interviews with key stakeholders are undertaken to understand their position in relation to the organization's values. These then form the ethical accounting statements.

Factor 3, 'Ethical behavior' exhibits significant difference between low positive and negative EVA (p value 0.03). The explanation for this is that low positive EVA firms are in a better position to follow ethical pursuit in their core business activities through responsible sourcing and adopting internationally accepted business standards. Factor 4, 'Stakeholder rights' also exhibits significant difference between high positive and low positive EVA (p value 0.08). Responding to stakeholder rights provides a critical pathway through which businesses find new ways to work, develop skills, seize opportunities and solve problems. For high positive EVA businesses can build its underlying enablers of long-term performance by identifying and realizing specific business opportunities. There is evidence of significant difference for factor 5, 'Sustainability' between high positive and negative EVA (p value 0.00) and factor 6, 'Environmental impact' between low positive and negative EVA (p value 0.06). The 'sustainability' is explained by ability for research investments on life cycle analysis and elimination of unsustainable products. In case of the 'environmental impact', low EVA firms could be preoccupied with action steps on prime issues like profitability and marketing.

## CHAPTER 11 DISCUSSION, IMPLICATIONS AND CONCLUSION

### 11.1 Discussion

These findings present a substantial case for the Societal, Environmental and Stakeholder drivers that act as engines for the creation of value that lead to Competitive Advantage in international firms. This study identifies the key Societal, Environmental and Stakeholder drivers, the extent of their use by international organizations and compares the significant differences of international organizations in the USA and Asia. The research also gauges the extent to which the Societal, Environmental and Stakeholder drivers and perceived Competitive Advantage relate to Economic Value Added.

The research builds on the 'lineages' from the literature on Corporate Social Responsibility approach (Carroll, 1979; Freeman, 1984 et. al.), the Business Ecosystem approach (Donaldson and Preston, 1995; Castells, 2000), Sustainability reporting approach (Center for Innovation in Management, 2003) and Value based management and Economic Value Added (Young and O'Byrne, 2001; Stern and Stewart; Dillon and Owers, 1997 et. al.). The research literature presented the impact of Corporate Social Responsibility (CSR) in terms of four areas of responsibility. Economic responsibility, maintains growth. Legal provides legitimacy. Ethical considers right behavior. Full commitment to responsibilities moves beyond compliance. The Stakeholder approach presented a new level of societal, environmental and stakeholder expectations.

The evolution of Societal and Environmental drivers amidst corporate 'turmoil' leads to a dynamic and a 'continuing state of emergence'. This challenge for CSR is to be a dynamic capability that is responsive to stakeholders, influences competitive advantage. The influence is exerted through 'value performance levers' or key drivers. To deploy the drivers calls for adaptations to the business models by incorporating knowledge based technologies that enhance value creation. In such a model, firms go beyond the shareholder interest fulfillment and create relationship based engagements with stakeholders like employees, communities, suppliers, sustainable technology and knowledge management. These linkages with the stakeholders provide considerable consultative inputs.

The strategic application of Corporate Social Responsibility is possible through proactive and stakeholder friendly strategies. In order to engage stakeholders, firms adopt innovations that affect strategies. This 'stakeholder criticality' aligns the aspirations of stakeholders to the business strategies as if in a business 'eco-system'. The aligning is done through mapping the stakeholder relationships onto the business models. Going by this premise individual firms are not expected to control the value chain in its entirety. In turn they focus on areas where they command competitive advantage. As seen in the Component Business Model from IBM (IBM Institute for Business Value, 2005), mapping is based at three levels, internally partnered, strategically partnered and industry networked. In order that the 'mapping' is effective, the respective drivers, societal, environmental and stakeholder drivers are to be isolated from the aggregate. This disaggregation of the Societal, Environmental and Economic drivers is manifested as the 'triple bottom line' way leading to the 'CSR value added' approach. CSR is not a new way of doing business but rather a way to perform businesses sustainably better.

This research examined the four key ways of CSR/Sustainability reporting. The reporting was based on: (i) code, practice and guideline based reporting (the UN Global Compact); (ii) auditable certification schemes (EMAS, SA8000); (iii) Rating indices for socially responsible investors (FTSE4Good, Dow Jones Sustainability Index); (iii) accounting and reporting frameworks (GRI). Among this Global Reporting Initiative (GRI) is comprehensive as it is applied to societal, environmental and economic performance. GRI offers no specific levels of performance and provides a framework for communicating. The SR 26000 is being evolved to focus on redistribution of resources, incomes, benefits and responsibilities.

This research establishes the linkages between societal, environmental and stakeholder drivers and competitive advantage assessed by Economic Value Added. There is empirical research evidence that Corporate Social Responsibility behaviors are strongly correlated to Return on Assets. Firms create value in three ways: (i) increase the Return on Capital Employed (ii) decreasing the Cost of Capital (iii) increasing return on assets. The sole focus on the bottom line does not necessarily lead to creation of value. As seen in Wal-Mart's case, the company stopped expanding though the profits were high, as such expansion showed negative EVA.

The shares of companies with good sustainability records perform better financially than those of less socially responsible firms. The premise that evolves is that good sustainability performance could lead to improved financial performance. Good financial performance could motivate a company to invest in improved sustainability initiatives. Corporate citizenship and Governance is increasingly adopted for Competitive advantage (Fittipaldi, 2004). It is here that Economic Value Added (EVA) becomes relevant as a demonstration of Competitive Advantage. The value added concept posits that a firm derives competitive advantage if it has a distinctive capability. EVA is measured as value added over the cost of capital.

EVA is an appropriate assessor of Competitive Advantage as it incorporates cost of capital. Competitive Advantage relates to key internal and external resources, capacity to innovate and creation and maintenance of reputation and strategic assets. Improvement in any of these factors leads to higher EVA. EVA improves the ecological 'footprint' as material and energy use is reduced. Designing environmentally friendly products helps to differentiate products. Cost of capital is lowered through process simplification, better asset utilization and waste elimination.

The case analysis of four International firms (two from the USA/Europe and two from Asia) showed that Global and Asian emphasis on the value drivers are not very different and it is possible to consider a common set of Societal, Environmental and Stakeholder drivers. These drivers are applicable irrespective of Industry and location differences.

The distinctiveness of this study is that it links the apparently 'intangible' values of societal, environmental and stakeholder drivers with the 'measurable' Economic Value Added. Another distinguishing feature of this research is that it identifies the difference between firms' 'internal' perception of Competitive Advantage derived from the societal, environmental and stakeholder drivers and its actual effect as assessed by Economic Value Added.

This research has significant contribution in terms of linking Societal, Environmental and Stakeholder drivers to Economic Value Added for International firms. The key findings included that the Global and Asian emphasis on the value drivers are not very different. It is possible to adopt a common set of Societal, Environmental and Stakeholder drivers, which would be applicable irrespective of Industry and location differences. The case studies and the Spearman rho ranking process helped to identify the key Societal, Environmental and Stakeholder drivers in international firms, as per the stated objectives of the study. The Regression analysis accomplished the specified objective to determine the extent to which the Societal, Environmental and Stakeholder drivers and perceived Competitive Advantage relate to Economic Value Added. The ANOVA compared the significant differences between firms from the USA and Asia with respect to the Societal, Environmental and Stakeholder drivers and EVA.

Key findings from analysis support the value propositions of the conceptual framework. The findings suggest societal and environmental drivers are significantly different between US and Asia. The mode by which environmental drivers could influence EVA is by reducing the ecological 'footprint' of material and energy use and increasing revenues by introducing environmentally compliant products that results in product differentiation and enhanced market acceptance. The societal drivers affect Competitive advantage by improving community trust.

The Regression analysis indicated some significant influences. In the combined model the location variable and the societal driver had significant influence on EVA. This supported the hypotheses that Societal drivers are significantly related to the Economic Value Added of firms. The regression on perceived Competitive Advantage exhibited significant influence on the drivers for the combined samples of US and Asia. The Societal drivers and the location variable were significantly related to perceived Competitive Advantage. These results need to be viewed in the perspective of global imbalance between the paces of liberalization, differences between the governance systems in advanced countries and developing countries and the inequity between the economic governance (IMF, World Bank, WTO) framework vis-à-vis the societal, environmental and stakeholder norms. The negative link between Gross Domestic Product and the societal, environmental and stakeholder driven EVA growth and perceived Competitive Advantage challenges these imbalances. Though there are advances in economic governance in western situations, Asian economies, with their relatively low GDP, could better leverage the societal, environmental and stakeholder drivers to gain in terms of EVA and Competitive Advantage.

In order to explore the robustness of the analysis used, the analysis of the sensitivity was undertaken. Through the sensitivity analysis the appropriateness of the selection of the drivers was tested. This analysis also assessed whether useful conclusions could be drawn from the previous analysis based on the methodology selected. In addition, it assesses the extent to which the composite model depends upon the information of its principal components.

The factor analysis was done from two perspectives, the EVA and the perceived Competitive Advantage. The former manifested six principal components while the latter had five key factors. The common factors were: policy impact/ compliance, ethical behavior, stakeholder rights and sustainability. Stakeholder engagement and environmental

impact were exclusive factors for the EVA based factor analysis and for the perceived Competitive advantage, the exclusive factor was consumer rights.

EVA is an 'external' determiner of the incremental value of firms that is applied to gain knowledge regarding the financial implications of its processes. It is 'external' as it is an index that may be applied to individual firms for assessment. But, the perceived Competitive advantage is an 'internal' assessment by the firms' personnel. Even though there are three common factors, their representative components are quite different between the 'external' EVA and the 'internal' perceived Competitive advantage. This implies that there is a necessity to increase the overlap between the EVA view and the perceived Competitive Advantage view of societal, environmental and stakeholder drivers. When the two sets of key factors match, it would generate maximum leverage for the firm, as it would mean that what the firm personnel feel as significant are also sensed by EVA assessment.

There were items that have low factor loadings in the factor loading tables signify that they are not noteworthy enough to be included in the principal factors. The inherent task for firms is to refocus on these items so as to make them count to drive the EVA and Competitive advantage.

Regression analysis was conducted using the key factors as the independent variables. The Gross Domestic Product (GDP) and location were introduced as control variables to determine whether there is any significant influence on the EVA and perceived Competitive Advantage. As one of the core objectives of this research is to compare US and Asian perspectives, the GDP and location become relevant. There is considerable difference in terms of GDP for USA and Asia. While GDP is over US \$ 12000 billion (2005) for US, the range of GDP for Asian countries is US \$ 120 billion to US \$ 4700 billion. The results of the regression show a negative beta value for GDP, though it is statistically not significant. It implies that firms located in lower GDP countries could generate higher EVA based on societal, environmental and stakeholder drivers. This challenges the general notion that higher levels of wealth could translate into available surplus to be invested for societal, environmental and stakeholder projects.

The regression analysis exhibited significant relationships for the USA companies. The Societal, Environmental and Stakeholder drivers explained 24 percent of the EVA. The US sample companies included large Trans National Companies (TNCs) who source their funds from sources that include Foreign Direct Investors. Due to growing predominance of Transnational Capital flow, recipient firms need to be focused not only on economic returns but also on the management of Societal, Environmental and Stakeholder drivers that have a direct bearing on the reputation of the firm. Firms with good reputation on product and service quality, ability to attract, develop and retain talent, have superior societal, environmental and stakeholder performance, and attract and retain capital resources. Firms need to be competitive not only 'commercially' but also in the Capital market, which is becoming increasingly responsive to Sustainably Responsible Investments. The high percentage (24 percent for the US as compared to 6 percent for Asia) indicates on relatively more influence of competitive and pressure groups in the USA than in Asia.

Results also show that after introducing the location variable, the influence of the combination of societal, environmental and stakeholder drivers increases to 45 percent of

the EVA. The location of the firms (in this case in the US) has a major effect on EVA. For instance, Gap Inc, the global company, is based in the US, as well as in other locations including China. Interestingly, it's stellar role in the US resulted in listings with Calvert Social Index, Domini 400 Social Index, Dow Jones Sustainability Index and the FTSE4Good US 100 indices in the USA. Gap in China, is partnering with the Association of Enterprises with Foreign Investment (CAEFI) to form the 'Better Workplace Foundation' in China. This relative difference in the application of Societal, Environmental and Stakeholder drivers has been affected by the afore-mentioned influence of the Investors in Trans National Companies. Gap Inc. featuring in a number of CSR Indices as well as its superior corporate performance reiterates the linkage of the Societal, Environmental and Stakeholder drivers and Competitive Advantage in USA. In Asia, the influence of Stakeholders like NGOs and pressure groups caused partnership approach with CAEFI.

During the Sensitivity analysis, Regression and ANOVA were performed on sub groups of the sample, which were classified as high positive, low positive and negative EVA firms. Due to the sample size, the prerequisites for such statistical analysis were partially met. However, this limitation did not affect the results as there was less/no statistical significance for the Sensitivity analysis.

This research includes qualitative support to the empirical analysis done by the questionnaire survey. The researcher met more than forty eminent Corporate CSR practitioners, participated in five International CSR Conferences and Doctoral Colloquiums. The reviews and insights from practitioners, academics and reviewers provide additional qualitative insights that enrich this study. CSR is comprised of Corporate Social responsibility, responsiveness and performance. Business is about creation of value for stakeholders. Value has economic, social and technological elements. The stakeholder concept developed over a period is endowed with features that satisfy multiple stakeholders. Each stakeholder is important for a business to be sustainable. The stock indices are well developed and communicated globally. There is a need to consolidate the ethical 'stake' indices and disseminate them to build up awareness (Freeman, 2004). The issue is to select the appropriate and significant influencers that affect the firm. The competitive advantage is derived from initiating strategies that responds to the stakeholder concerns. Traditionally financial pre-occupations have determined such competitive advantage. The need is to achieve a proper balance between competitive advantage derived from economic reasons with corporate social responsibility (Kay, 2004). The effect of compliance with societal and environmental standards may not lead to competitive advantage. Whether CSR compliance leads to creation of value or adds to the overheads, would determine the motivation of the corporate leaders to adopt CSR into the strategy. Economic Value Added is well-suited for the 'objective' linkage between the societal, environmental and stakeholder drivers. However, EVA may yield results in the medium or the long term, but not immediate effect. Often firms are compelled to demonstrate immediate results. This is the challenge for the linkage between the societal, environmental and stakeholder drivers and strategy (Ghuri, Paliwoda and Wheeler, 2006).

*1) practical insights 2) academic*

## 11.2 Implications

The Stakeholder approach of analyzing the firms' handling of the parameters leads to pathways from high quality stakeholder relationships, which could lead to enhanced business value.

Based on the specific objectives of this research study, certain implications evolve. The key Societal, Environmental and Stakeholder drivers of Competitive Advantage that were identified for the international firms selected from the USA and Asia, represented a common set irrespective of location or industry. The higher correlation between the firms implies increased response to the drivers. The implication is that it is possible to adopt a common set of Societal, Environmental and Stakeholder drivers irrespective of Industry and location differences.

The results indicated that for the US companies, the Societal, Environmental and Stakeholder drivers explained 24 per cent of the EVA as against 6 percent for the Asian firms. The role of the Foreign Direct Investors (FDIs) is increasingly more pronounced. Hence, the firms in the US are careful with regard to their Societal, Environmental and Stakeholder drivers. In case of Asian firms, the implication is to address their Societal, Environmental and Stakeholder concerns not only in response to the pressure groups or NGO activists, but also taking into account the formidable impact of the FDIs. This implies that managing the relationships with the NGOs would impact the firms positively, but creating higher EVA in response to the Societal, Environmental and Stakeholder drivers, would cause greater impact on the investor confidence.

A firm might use this analysis to monitor its societal and environmental compliance over time and take corrective steps to augment its business performance and competitive advantage.

When firms are aware of the relevant critical drivers, they could effectively adapt to emerging-markets. A firm could adopt a proactive stance in order to surpass compliance, to be ahead of environmental demands and to invest more environmental measures to exceed legislative demands. The company might decide to adopt a market-oriented strategy with adaptive component, by engaging with consumers, enter new markets with eco-products and reorient through constant tracking of competitors' actions. As evident from this research, firms develop codes of conduct like ethical orientation, demonstrating expected behavior, ongoing process improvement and real-time reporting.

Impact of the Societal drivers on strategic initiatives are evident from corporate initiatives. Societal drivers can become engines for creation of value, as in the case of Toyota. Their hybrid vehicles, ultra low emissions, fuel cell have a Societal concerns at its core. Societal drivers can add value. The 'Water, Wellness and Health' for Coca Cola and the Millenium Development Goals and Community initiatives of the Tata Trust, have the Societal drivers at its foundation.

Emerging sustainability practices like eco-design and ecosystem stewardship, and societal and stakeholder engagement through business redefinition, require realigning of organizational systems and processes. Pressures from regulators, environmental NGOs, customer demands for certification, as well as employee influences through environmental taskforces are incorporated as eco-design. These developments indicate that as companies

are moving beyond the early phases of pollution control and eco-efficiency. They are ready to focus on more fundamental changes in design of processes, products, and systems to prevent pollution. The stage is set for a transition to the eco-design or pollution prevention phase, which is a precursor to eco-stewardship.

It is significant to note that the size and scale of operations affect sustainability performance, like pollution control, eco-efficiency and recycling. As for pollution control is affected by the quantum of wastes and risk of visibility. Eco-efficiency depends on the level potential savings through material and energy conservation. However, size does not matter for eco-design and eco-stewardship, for sustainability and business redefinition, for societal and stakeholder engagement. These phases require innovation and knowledge-based approaches, both unrelated to size effects. Therefore, smaller firms can potentially create competitive niches via disruptive innovations in more sustainable product designs or business models (Hart and Milstein, 1999).

This could reflect that respondents from Asia appreciate the importance of these sets of drivers somewhat more than their US counterparts. At the firm level the interpretation for this is the need to manage resources for these drivers to add to the competitive advantage of the firms. It also could mean that, the top management should disaggregate the sets of drivers at the operational level so that perception could be converted to action through measurable initiatives in stakeholder and environmental initiatives.

A significant implication from this research is the involvement of stakeholders in the form of drivers in a firm's strategy becomes a valuable capability which leads to perceived competitive advantage. The key drivers are not definitive. Individual companies need to review their initiatives and applicability closely.

### **11.3 Conclusion: Contributions and Implications for Future research**

This research has been able to integrate the Societal, Environmental and Stakeholder drivers relevant to firms with the 'objective' Economic Value Added and the 'internal' perceived Competitive Advantage for International firms. The research delves into literature and case studies to offer a dynamic framework that integrates Corporate Social Responsibility to Strategy. The adoption of the framework initiates with the identification of relevant Societal, Environmental and Stakeholder drivers. The extent of impact on Economic Value Added adds certain degree of objectivity, implementability and measurability to the 'intangible' Societal, Environmental and Stakeholder drivers. The literature indicated that induction of Corporate Social Responsibility into corporate practice is 'intuitively appealing' (Knox, 2005) and are often difficult to operationalize at the ground level. Surveys, reports and literature also indicated the use of Sustainability reports by firms without evidence of impact on corporate decision making (Zadek, 2002). The challenge for companies is to 'permeate' the entire hierarchy in the spirit of value adding initiatives derived from Societal, Environmental and Stakeholder drivers. The dynamic framework evolved through this research contributes towards this objective. The Societal, Environmental and Stakeholder drivers may be adapted in their own meaningful way at the ground level. The overall firm reputation could aggregate from the cumulative 'slices' of value driven steps at the operational level and up the hierarchy. The case studies and the survey undertaken in this research study indicates the applicability of Societal, Environmental and Stakeholder drivers across regions (USA and Asia), across industries (sample firms were selected from 17 different industries), across differing levels of Gross

Domestic Product (sample firms are from highly varying GDP countries). But there a distinct dearth of appropriate framework for the implementation of CSR programs that dovetail with the firm strategies. The core issue here is the way to conduct business that creates value and at the same time are responsible to the society, the environment and the stakeholders. A related challenge is the diffusion of the CSR–strategy linkage down the line from the leadership level to the operational level.

The research also presents the ‘firm specific’ perceived Competitive Advantage derived from the Societal, Environmental and Stakeholder drivers. International firms are able to gauge the difference of the impact of Societal, Environmental and Stakeholder drivers on the ‘objective’ EVA and the ‘internal’ perceived Competitive Advantage. Appropriate actions can be taken to narrow the gap between the two impacts. The implication for this is that the firm would be able to establish that what the ‘internal’ stakeholder groups (employees, suppliers and similar) determine as Competitive Advantage generated from the deployment of Societal, Environmental and Stakeholder drivers matches with the ‘objective’ Economic Value Added. The dynamic nature of the framework enables companies to benchmark their CSR performance periodically, as they do the same for traditional initiatives like marketing and R & D. The linkage of the societal, environmental and stakeholder drivers with the Economic Value Added (EVA) provides justification to the corporate leadership to pursue CSR.

This research study contributes to the aspect of attracting investments by linking the Societal, Environmental and Stakeholder drivers with Economic Value Added (EVA). The Foreign Direct Investors closely monitor the EVA while deciding the destination for their investment capital. Firms with good reputation on product and service quality, ability to attract, develop and retain talent and have superior societal and environmental performance, attract capital resources.

A significant contribution in terms of the research methodology is to highlight the role of EVA as an assessor of Competitive Advantage. EVA has the potential to become an integral entity in the strategy implementation process of a firm. Capital investors aim to maximize the company’s stream of future EVAs. When linked with incentives, EVA may drive the managers to take decisions that lead to creation of value.

Usually, managers are rewarded for their performance of the past period based on the results they have already delivered. On the contrary, investors and capital markets value companies based on the expectations of the future. EVA provides a common goal for the investors as well as for the managers. Furthermore when EVA is driven by Societal, Environmental and Stakeholder drivers, sustainability is incorporated into the framework.

The findings create opportunities for further research. Firms could be interested to benchmark their CSR performance and identify the critical drivers periodically. Firms with negative EVA or low positive EVA could be endeavoring to review its position. Future research could address the issue that managers face, to objectively judge the Societal, Environmental and Stakeholder drivers’ impact on the creation of value. Such research would probe key processes, established systems and decision making, which would be re-aligned to create added value.

The scope of future research should be broadened to include regions not included like Europe, South America and Africa. Due to the growing relevance of the ‘BRIC’ (Brazil,

Russia, India and China) as nodal points for growth, the research must address correlations between the impact of growth on sustainability issues like global warming and societal issues like quality of life.

In conclusion, this research unfurls the role of Societal, Environmental and Stakeholder drivers on creation of value for firms. This era of globalization and emergence of new growth nodes (like the BRIC countries, i.e., Brazil, Russia, India and China, among others), foreign direct investment has attained a high degree of mobility. Companies need to deliver or the investors would migrate. The new growth nodes are appearing to be preferred destinations for investors. Companies are increasingly under scrutiny not only for the creation of value but for good governance that incorporates the Societal, Environmental and Stakeholder drivers. Managers are being motivated by EVA-linked rewards as a sustainable metric for performance. Customers, suppliers and network partners are valuing the reputations of companies with whom they are associated.

Corporate entities who can add momentum to their core strategy with the ‘sustainable prime movers’, viz., the Societal, Environmental and Stakeholder drivers, would emerge as the successful companies of the future.

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